Clinical Lecture
ON
EXTRA-UTERINE GESTATION.

Delivered at St. Bartholomew's Hospital,

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GENTLEMEN,—It is only audacious ignorance that could give clear and decided teaching on the theory and practice of extra-uterine gestation; and it is clearness and decision, when they are fairly attainable, that should characterise clinical teaching of youth. Yet I must not pass without notice this great subject. My remarks will touch only on some points, as I trust to your careful systematic study of it in the museum, and in such a treatise as Spiegelberg's "Text-book of Midwifery," recently translated by one who a very few years ago sat where you now are. The theory and chiefly the anatomy of it leave many open questions, some of which have distinct bearings on practice. Recently these have made some progress, due chiefly to improved anatomical methods, especially homalographic frozen sections, and to the many laparotomies which are now performed in this disease. But laparotomies do, in most cases, give imperfect information as to anatomy. Often, indeed, they mislead. It is to post-mortem work that we have chiefly to look for advance of knowledge. In practice also there are many open and urgent questions, and here much has been gained by the extension of laparotomy; but much has yet to be done in regulating its application in the varied conditions of different cases and in establishing its method. On the details of surgical interference in this morbid condition, whether laparotomy or other, I say nothing, referring you to systematic works such as Doran's "Gynæcological Operations."

Many kinds of extra-uterine fœtation are described—interstitial, tubal, tubovarian, ovarian, and abdominal. Of each of these, again, there are kinds varying according to situation; but the chief variations are in the abdominal, the placenta being inserted on the pelvic, or parietal, or intestinal peritoneum. Again, important kinds depend on the stage of advancement of the pregnancy. With these two sets of kinds of extra-uterine must be classed, for practical or clinical purposes, a kind of truly intra-uterine pregnancy, the uterus being malformed, and the fœtus developed in a uterine horn which has no communication with the cervix uteri or vagina. Of this you have here a museum specimen. This pregnancy in an imperfectly developed uterine horn is generally easily made out on dissection post mortem; during life it can only be guessed at. It is truly in a double uterus, but it is not designated pregnancy in a double uterus. So-called double uterus is of various kinds, and pregnancy in one horn or one compartment, or in both, is, comparatively speaking, nearly a natural pregnancy, and ends in labour and delivery almost like a healthy pregnancy. Pregnancy in an undeveloped uterine horn is in practice classed with extra-uterine pregnancy; it behaves like it. Besides the varied situations of extra-uterine pregnancy already mentioned, there are secondary variations. Thus an ovarian pregnancy may become ovario-tubal. An interstitial pregnancy may become tubo-uterine. A tubal pregnancy may become tubo-abdominal, the ovum retaining its tubal attachment and growing into the abdominal cavity through a rupture or through the fimbriated orifice. Again, a tubal pregnancy may become extra-peritoneal, the tube opening up the broad ligament, probably generally by rupture where the folds of the ligament separate to enclose the tube. You know that an ovarian tumour may in a like manner open up the broad ligament and become extensively extra-peritoneal. When a pregnancy becomes tubo-abdominal or ovario-abdominal, and continues, it grows as an abdominal or ventral pregnancy. The membranes persist and form a bag enclosing the fœtus and waters; and the bag, again, is enclosed by an envelope of false membranes; and this envelope or sac may be free or adherent to adjacent wall or bowel; or the fœtal membranes may be growing free in the abdomen; or, what is so wonderful as to be almost incredible, there may be, in advanced pregnancy, no enclosing fœtal membranes, the fœtus being free in the abdominal cavity along with the bowels. The sac of an abdominal pregnancy is said to contain muscular tissue, and to have contractions or pains; but this is not asserted in regard to the sac of a secondary abdominal pregnancy. I have not made the observation in any case.

Though these progressions of the fœtal sac from one site to another may take place in the case of an extra-uterine gestation, it is a good rule to classify the varieties of the disease according to the original site; and the original site is determined by the insertion of the placenta. There is no other site of placental insertion but the original site—no reason to believe that the placenta ever does or can change its site. It cannot be transplanted. Authors of eminence have believed that it can be transplanted, as from the tubal mucous membrane to the peritoneum after laceration of the tube and displacement of the whole ovum from it or part of it from it. A somewhat similar view has been held regarding the placenta when it is detached during pregnancy. It has been held that, when it has been partially separated, the separated part may become attached again, may take root again. Meantime I believe this does not happen. There is no evidence of this taking place either in placenta prævia or in extra-uterine pregnancy. I can imagine cohesion, or renewed adhesion, or a kind of healing, but I cannot believe in a resumption of function by the previously detached part. Every author on this subject recognises the peritoneal insertion of the placenta, and in every such case I believe it is the original insertion. Tubal pregnancy is by far the most frequent kind. Were transplantation of placenta possible, many cases of abdominal pregnancy, or all cases, might be called secondary; and this would increase the predominance of tubal, and give a fine appearance of simplicity. These remarks are to be applied to extra-peritoneal pregnancy also—that is, when the ovum grows between the layers of the broad ligament, separating them and reaching the parametric cellular tissue. The placenta cannot be transplanted into the cellular tissue.

There are no definite symptoms of this condition apart from those of pregnancy. It is to signs and to accidents that you trust for diagnosis, and not rarely you have great uncertainty. Abdominal pregnancy has fewest symptoms; it may go on to full term not suspected to be other than a normal pregnancy. Indeed, like others, I believe I have observed it go on beyond the natural term, the child surviving—protracted pregnancy. The thinness of the coverings of the fœtus as felt through the abdominal wall may be very striking, especially if there is hydramnios. When the placenta is inserted in the bowel, generally on the colon, there is said to be liability to intestinal catarrh, diarrhœa, the stools being sometimes tinted with blood. There may be various aches and pains, varying in different cases; and in a case recently in "Martha" there was retention of urine for a time. You may find a souffle in the tumour synchronous with the mother's pulse; and, as in two cases lately in the same ward, you may find the fœtal heart in an unusual position; in the two cases referred to, heard best with the stethoscope applied over the inguinal canal. Examining in an early stage, you may be unable to detect anything abnormal; or you may find in the region of a tube a rounded mobile tumour of the size of a nut or a hen's egg; or, it may be, behind the uterus. As the tumour grows, it generally gets behind the uterus, pushing it forwards and a little upwards. The whole mass gets fixed in the pelvis, and may have an elastic or a solid feeling; it may be like a retroverted gravid uterus, or like a perimetritic mass, or a hæmatocele. If the fœtus survives, or if the placenta grows, as it sometimes does after the fœtus is dead, the tumour increases, but not generally in shape and position as a uterine pregnancy increases. An advanced abdominal pregnancy may closely resemble a natural pregnancy; but the uterus is generally felt distinct from the fœtal sac, enlarged greatly, and, as already said, generally in front of the fœtal sac. The cervix changes as in pregnancy, but its characters are not so distinct, and therefore not so reliable. This point needs more study.

The great mass of cases is tubal, and in the great majority of them the fœtus dies early and without any apparent cause. The progress of pregnancy is thus arrested, and milk generally appears in the breasts if the fœtus is not in a very early stage of its existence. Symptoms disappear

and, as in two cases lately in "Martha," where diagnosis was certain, the fœtal heart having been heard, the woman returns to show herself quite comfortable; after years of absence the shrunken fœtal sac being easily discovered. How often the favourable progress occurs and how long it may endure nobody can tell—oftener, I dare say, than seems to be now generally supposed. Of the changes that may occur I shall say almost nothing: suppuration of the sac and discharge of its contents, as happens in perimetric abscess; decomposition of the fœtus and discharge of the whole contents of the sac; mummification of the fœtus, as in missed abortion; or the formation of lithopædion.

A striking accident in extra-uterine gestation is the occurrence of uterine hæmorrhage, generally slight and at irregular intervals, and sometimes accompanied with abortion or labour pains and the discharge of decidua. There may be no hæmorrhage, no labour pains, no discharge of decidua. The hæmorrhage may have a periodic character and resemble menstruation. The discharge of decidua may be in shreds or in a regular entire uterine cast. It is only when it is an entire uterine cast, rich in bloodvessels, and as thick as a penny or as two pennies, that you can make it a sign of extra-uterine gestation. You are familiar with the little shreds of mucous membrane discharged sometimes in healthy menstruation, and with the discharge in dysmenorrhœa membranosa. In the latter the discharge is a thin membrane, and almost always lacerated. For myself, I can say that I have not seen the entire, thick, rich decidua discharged in one piece except in extra-uterine gestation, and in cases where I suspected or satisfied myself of very early abortion.

There is reason to believe that the pain of strong tubal contractions is intense, and women have intense pain at or before rupture, and at such times it often happens that simultaneously the uterus casts off the decidua by proper uterine contractions. The tubal contraction causes rupture; the uterine causes separation and expulsion of decidua. Sometimes the expulsion of decidua is contemporaneous with the death of the fœtus, not always. The decidual cast may be thrown off, and the pregnancy advance. A tubal gestation generally ruptures, but not always. As a consequence you have the great accident—one really awful—anæmic collapse from rupture of the sac and intra-peritoneal hæmorrhage. This may be the first intimation to you of the existence of this morbid pregnancy, and it not rarely occurs when pregnancy is not even suspected. Generally it occurs before the end of the second month. If you look at these specimens from the museum, you will see they are all in very early pregnancy, and one presents an opening not much bigger than a large pin's head in a sac scarcely larger than a good hazel-nut.

In the state of collapse you may not be able to recognise the hæmorrhage by physical examination, or you may find the uterus pressed somewhat forwards and a baggy feeling behind it. As you would expect, the hæmorrhage generally fills the pouch of Douglas first and then adjacent parts. Judging by a case recently under observation by myself and others, I can assert that the hæmorrhage may be great without making the pouch of Douglas replete, the blood lying in the flanks beneath the intestines. In ordinary cases, if the woman survives, you soon—that is, in twenty-four or thirty-six hours—have the characters of hæmatocele, and generally of retro-uterine hæmatocele, a subject discussed in another lecture. In none of the many cases which have come under my observation have I seen a hæmatoma of the broad ligament and beneath it, a condition which might be produced when a tubal pregnancy ruptures into the tissues separating the layers of the broad ligament. I have seen cases where the greatest collapse was, as I have just said, accompanied by no physical evidence of hæmorrhage in the pelvis, and it should not be forgotten that it is widely held that collapse produced by rupture and intra-peritoneal hæmorrhage may be intense, far beyond what the mere amount of blood lost would entail.

This intra-peritoneal hæmorrhage is a terrible accident, and has often been said to be always fatal, either primarily or as a form of hæmatocele. This is not the case. Many die. Many cases are never diagnosed exactly from hæmatocele, and behave as hæmatoceles, complete recovery resulting. Several cases in "Martha" have illustrated this favourable progress. Many years ago a patient sent for me, saying she had the pains of abortion, and showing me what she regarded as the ovum; it was a complete decidual uterine cast. A few hours afterwards she had the most profound collapse—pulseless, cold, and as if dying there and then. This state lasted for nearly two days. At first a boggy feeling was detected in Douglas's pouch, but before the collapse was quite gone there were all the physical signs of retro-uterine hæmatocele. In consequence of slowness of progress of absorption, I opened the sac by bistoury per vaginam, and subsequently regretted I had done so. Chorionic structures were found in the bloody discharge. This woman subsequently bore children. Not long ago, with some eminent colleagues, I saw a case of this kind; none could be worse; the pregnancy was of only a few weeks' standing; there was no discharge of decidua. Examination per vaginam discovered nothing abnormal. Recovery from collapse was quick and complete. The pregnancy went on, and a dead eight-months' fœtus was extracted by laparotomy. Take notice of the important observation in this case—that the rupture of the sac did not arrest the pregnancy, and that there was no discharge of decidua.

It is known that embryonic tissues lodged in the peritoneal cavity behave differently from the same tissues not embryonic; and these facts lend some support to the opinion that the embryo or even the fœtus may be absorbed. The absorption of the fœtus of several months of age has, so far as I know, been only recently asserted, but many believe in the absorption of an early embryo. I cannot prove it, yet I do not doubt it. The earlier the embryo, the easier will its delicate tissues be changed and absorbed. How old a fœtus may be so dealt with in the peritoneal cavity I cannot even guess, but I may say that it would require very strong evidence to make me believe that one so old as six weeks, when ossification has begun, may disappear entirely in this way. Cases have been described as of extra-uterine gestation where, in laparotomy, no ovuline structures were found, only blood; and I have seen one such. But I think such diagnosis erroneous, for I believe that long before the absorption of the ovum the blood would be absorbed. No doubt in some such cases the diagnosis, after the failure to find the ovum in laparotomy, may be correct, for every pouch of the hæmatocele or of the hæmatoma may not have been explored. Where no ovuline structures are found, after due search, the diagnosis should be hæmatocele. The hæmatocele is certain; the extra-uterine gestation is at least questionable. Another accident I have watched, in the days when early laparotomy was not thought of—namely, repeated attacks of acute peritonitis. These arose from growth of the fœtal sac causing ruptures of surrounding adhesions.

Now we come to the very difficult and unsettled subject of treatment, and first it must be noted that many cases require and get no treatment. There are many cases in which the disease is never even suspected; the fœtus dies, and is, so to speak, entombed. It may be found accidentally at a necropsy. The only fine specimen of a lithopædion I ever possessed was so discovered. Several cases have occurred to me when the first intimation of the disease was the discharge of fœtal bones, a subject I have already alluded to. We have had cases in "Martha" where the disease, which caused ill-defined suffering, was absolutely diagnosed by hearing the fœtal heart, and where nothing was done, the fœtus dying while the patient was in the ward; and in some of these cases we know that the patient remains in good health, with the dried-up fœtus entombed in the abdomen. This entombment does not prevent the occurrence of another extra-uterine pregnancy, does not prevent the occurrence of a natural pregnancy and a natural parturition. But, no doubt, it is a standing menace to the woman's health and safety.

Death of the fœtus almost always implies arrest of the progress of the case; not always and altogether so, for sometimes the placenta grows after fœtal death. Hence it has naturally come to be a great object of treatment to secure the death of the fœtus. We may say that, before the laparotomy enthusiasm of recent times, it was the great object of treatment of a progressing case. Now, I have told you that often, very often, and without any apparent cause, the fœtus dies early, and this occurrence makes judgment of the value of fœticide treatment difficult. To secure the death of a fœtus three methods are adopted: drawing off the liquor amnii, injection of morphia into the fœtal sac or fœtus, and electricity or galvanism. Paracentesis of the amniotic sac does not secure anything in normal pregnancy, nor does it in extra-uterine; and the same is true of both the other methods. I have no faith in any of them; and it is to be remembered that none of them is sure

to be harmless, however carefully performed. Any of them may bring to an end the frail life of the fœtus; none of them, nor a combination of them, secures this termination. Then comes removal by surgical operation, chiefly by laparotomy. You may, as lately in "Martha," find cases tempting to removal per rectum or per vaginam, the fœtal sac offering itself in one or other of these passages, or being already actually open. But, in general, it is laparotomy that you have to consider. When the fœtus is already viable or farther advanced, you will think of early laparotomy and keep in mind the great danger of hæmorrhage from separation of the placenta, which you have no satisfactory means of arresting. The good rule, at present at least, is to meddle with the placenta as little as possible, and to keep the emptied sac as aseptic as you can, after removal of the fœtus. The danger of hæmorrhage is greatly diminished by the fœtus being long dead, say for some weeks; and it may well happen that to secure this diminution of danger when the fœtus is long dead, delay may be advisable. In an early stage, when anæmic collapse comes, immediate or primary laparotomy has been recommended, but it has seldom been done. The patient is so nearly dead that the surgeon declines to interfere, on the ground that he feels sure the patient would die on the table. Besides, the diagnosis is often insecure, and true surgical courage does not flourish under an insecure diagnosis. Of insecurity of diagnosis, felt at the time, we had a fine example lately in "Martha." Into all its details I need not enter, only remarking that in the very imperfect history we had ordinary symptoms and signs of pregnancy and of hæmatocele coming suddenly, with profound collapse; and pain when in the ward, chiefly in the hypogastric region. We decided to wait. She aborted of a six-weeks' fœtus, and died. The viscera in the roof of the pelvis were matted together by recent inflammation. There was a perforating ulcer of the stomach and acute purulent peritonitis near this part. The operation of laparotomy and extirpation has been successfully done in or close to the period of collapse. It has been often done on recovery from the collapse. Indeed, I may say that at present it is the proceeding most relied on. It or waiting are the alternatives.

What will be the ultimate result of the present enthusiasm for abdominal surgery no one can foresee. In extra-uterine gestation much has yet to be done before the utility of laparotomy can be well defined. We need more knowledge of the natural progress of the disease, more knowledge of the anatomy, more experience in laparotomy. Already much is surely to be gained by judicious laparotomy, and more is to be expected in the future.

Clinical Lecture
ON A
CASE OF PROTRACTED AND SEVERE CHOREA TREATED BY PROLONGED SLEEP.

Delivered in University College Hospital,

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GENTLEMEN,—The case we shall consider to-day is principally of interest on account of the treatment that has been adopted. This has been based upon a very definite principle. You will know that almost invariably the movements of chorea are arrested during sleep. The disordered actions of the nervous centres upon which these movements depend are therefore also arrested. By greatly prolonging this period of rest we may accomplish two things: first, we may cut short the mischief which is almost inevitably being done to nerve centres by the maintenance of this incessant and unnatural activity; and, secondly, during such periods of prolonged rest we afford an opportunity for the gradual abatement of the functional perversion in certain parts of the nervous system (wheresoever situated) which has been the primary cause of the malady. Such a restoration of the normal equilibrium of functions, under the influence, as our forefathers would say, of the *vis medicatrix naturæ*, is the main object of this method of treatment. It is a mode of treatment which is applicable only to certain aggravated cases of chorea, but to this part of the subject it will be more convenient for me to refer later on. From the point of view of etiology and of symptoms chorea and hysteria are sometimes closely related, and the case which we are now about to consider presents many points suggestive of the existence of a hysterical factor, especially in its initial stages. The nature of the fits or "fainting" attacks to which the patient has been subject must remain uncertain, in the absence of adequate details concerning them. None of these attacks have been seen, and none have occurred during the three months that she has been under treatment here. She came under our care solely on account of the chorea, which commenced nearly nine months before her admission, coming on about twelve hours after some great fatigue and excitement endured at a time when her general health was much lowered. The very regular and rhythmical nature of the movements which she presented was certainly rather in accordance with what is often met with in so-called hysterical chorea; but there was a total absence of any associated anæsthesia, rigidity, or paralysis; and until the close of her second period of sleep there was an absence also of any general symptoms of a hysterical order.

Louisa S——, aged twenty, nursemaid, was admitted on Feb. 26th, 1889, complaining of severe and general choreic movements, also of headache and of pains in other parts of the body. Up to five years ago she had had fair health except for frequent headaches (two or three times a week as long as she remembers). Five years ago she had a severe fright, owing to a child, partly under her care, falling out of an express train. She did not faint, she says, but became "light-headed," not knowing what she did for several days. During the next twelve months she was under treatment for "bloodlessness," being very pale and languid, but not keeping her bed at all. Three years ago, while walking, she felt suddenly very strange—cold and giddy,—hurried home and "fainted," being unconscious for three hours. She did not bite her tongue or pass urine in this or in any subsequent similar attack. When she was recovering she struggled a little and cried a good deal, and her head ached terribly. She "fainted" every day for a week. Afterwards the faintings came on about once in three weeks, sometimes lasting an hour. Her headaches, too, became bad. She went to a doctor on account of the "faintings," and remained under treatment (on their account) for two years, and she continued subject to these attacks from time to time up to within two weeks of her admission to this hospital. Eight months and a half ago, whilst spending a week at Folkestone on account of her delicate health, the choreic tremblings began for the first time. They came on during the evening of a day on which she had taken two marches with the "Salvation Army"—one in the morning and one in the afternoon, each of about four or five miles. She noticed the tremor first in the right hand, but the next day it was "all over her." It was very severe, but she could walk at that time. After about a week the tremor became less and she returned to London, where she was laid up a month with it. She then went to Scotland, where the shakings became much worse at once, and she was admitted to the Edinburgh Infirmary. There, in addition to medicine, she was treated by general massage and the battery to the right arm. The arms were the most affected by the tremor, the legs much less so, for she could walk a little; but, on the whole, when she entered the infirmary she was not so bad as she was when she came to this hospital. She remained for four months in the infirmary, and during the last nine weeks of that time she was isolated in a separate room, the massage being continued, but not the battery; her back and head were also "sprayed with ether" to relieve the pains in them. At the end of nine weeks' isolation she was much better, the tremors being less severe, but not quite gone. She then returned to London, but the railway journey made her very bad, and on alighting from the train her legs trembled more than ever. She now shook all over, except her head, and had never been so bad before. After remaining a week at home she was admitted to this hospital. There is nothing of significance in her family history, except that her father died of phthisis, and that her two sisters are said to be consumptive. There is no history of nervous complaints.

State on admission.—The patient lies in bed with a peculiar nervous expression of face, the eyelids twitching

when she looks up, which is seldom, and only for an instant when spoken to; otherwise there is no tremor about the face. Cheeks somewhat flushed, in a patchy manner, owing to pale areas scattered through the redder tint. The lips move naturally in speaking. There is no paralysis of any face muscle or eye muscle. The mucous membranes generally have a healthy colour. The skin is rather moist. The patient is generally well nourished. Usual temperature in the mouth, 99°. The movements, as she lies in bed, affect both hands and arms, as well as both legs. Those in the right hand are the most marked, and those in the right leg the least of all, the latter being at times scarcely noticeable. When she attempts to stand or walk (which is scarcely possible even with assistance) the movements become general and very violent, even the head being moved up and down by the neck muscles. The movements are increased when she is being watched, but never cease at any time when she is awake. During sleep, as a rule, they cease entirely, though once or twice a slight tremor has been noticed. By an effort of the will the movements can be slightly lessened; they are all rapid, regular, and rhythmical. The movements of the hand consist of rapid flexions and extensions of the fingers (the general position being one of slight flexion), with adduction and abduction of the thumb. These are accompanied by rapid and more marked flexions of the wrist, less extensive but equally rapid flexions of the elbow, and when she is excited slight movements also at the shoulder, abducting and adducting the arm. All the movements of the hands and arms increase in violence when the patient sits up or when she puts out her tongue. The movements in the legs are present at the hip, knee, and ankle, and consist of rapid flexions of each. The general position of the hip and knee is one of very slight flexion, and this is much more marked in the left than in the right leg. Headache is almost continuous, dull, but with occasional exacerbations—usually frontal, though sometimes it is occipital. There has never been any vomiting, and only occasional nausea. The pain in the lumbar region is a dull aching, as is also the pain in the left iliac region. There is tenderness on pressure in both these places. Sleep is bad, and has been so for months except after a night draught. Her mind is clear, and her memory seems good. The sight is fairly good, but the visual field is concentrically narrowed in both eyes. Pupils equal, of medium size, reacting to light and accommodation. The ophthalmoscope reveals nothing abnormal. There is no anæsthesia or rigidity anywhere. Both knee-jerks are somewhat exaggerated. A marked *tache cérébrale* is obtainable on the abdomen. The patient has been subject to shortness of breath on exertion, and palpitation when excited. The heart's apex beat can be felt in the fifth space. There are no cardiac murmurs, the sounds being normal. Pulse regular, from 100 to 108 per minute. No cough. Voice natural. Respirations rapid, more especially when they are being counted—48 per minute. Percussion note good all over the lungs. Nothing abnormal in the respiratory sounds anywhere. Tongue pretty clean. Occasionally there is a little feeling of nausea; no vomiting. Appetite shortly after admission good. Bowels very constipated, never open without medicine, and sometimes requiring an enema as well. There is pain in the epigastrium sometimes soon after taking food. Menstruation began at the age of twelve; it was never regular, and the patient has not menstruated for the last seven months. Previously the flow had frequently lasted for two months. Her urine contains neither albumen nor sugar.

Synopsis of notes concerning management and progress of case.—The patient, being admitted on Feb. 25th, was kept at rest in bed. On Feb. 27th she was ordered a mixture containing four minims of liquor arsenicalis, fifteen grains of bromide of potassium, and ten minims of spirits of chloroform in an ounce of water, to be taken three times a day; also, a five-grain pill of aloes and myrrh every morning. At the end of a week from admission there was almost no improvement. On March 4th she was prescribed twenty grains of chloral hydrate and ten grains of bromide of potassium, to be repeated on awaking; the patient to be allowed only half an hour awake at a time for the taking of nourishment; the sleeping draught to be used as seldom as possible. At first the draught was required every four hours; later on, sometimes the patient slept eight hours without awaking, but on an average she was given it every six hours. The light near the patient was lessened, screens were drawn round the bed, and quiet was observed as far as possible. Her food was beef-tea or mutton broth, about a pint and a half, milk about the same amount, and usually two eggs beaten up with the latter, during the twenty-four hours. To relieve the constipation forty-five minims of the liquid extract of cascara were given every night, with (if needed) an enema in the morning. (The bromide was added to the chloral on the second day to relieve the headache she complained of on awaking.) During the sleep thus induced the patient's tremor ceased, except when some noise disturbed her a little, though once or twice slight movements of her knee and hand were seen when the ward was quite quiet. These movements during sleep grew rarer towards the end of the fortnight. In her waking intervals, which sometimes exceeded half an hour, but which were kept as nearly as possible to that time, the movements of all the limbs became gradually less; but she complained greatly of headache, especially if any light fell upon her eyes. She was also very emotional—crying at times. But she took her food well, and the medicine kept her bowels fairly regular. Her temperature varied during this sleep from 99·6° to 95·4° (the latter temperature only being registered once at about 2 A.M.). Her pulse varied from 70 to 102, and her respirations from 20 to 52.

March 18th.—She was allowed to awake. The movements were distinctly less marked and extensive. She complained much of headache, and was ordered some medicine for its relief. Her breathing was rapid and shallow, 60 per minute; her pulse regular, 84, rather compressible. On the 25th, the patient's headache being better, although the pain in the epigastrium and back remained, sleep was again induced as before. Her appetite remained good. The movements during the waking intervals grew less and less, and the headache was not so severe as it had been previously. During this second sleep, which was of three weeks' duration, her temperature varied from 96·7° to 99·6°, her pulse from 70 to 114, and her respirations from 30 to 60. These records as to pulse and respiration (like those previously given) apply to the brief waking intervals; but during this second period observations were also made as to pulse and respiration whilst the patient was actually asleep. Both were found to be distinctly slower and more natural at these times than they were during the waking intervals. Thus the average of sixteen observations of this kind gives for the pulse 70, and for respirations 30. It should be recollected, moreover, that during the first week of her stay in the hospital, before she was put upon the chloral treatment, her pulse was mostly 100 to 108, and her respirations 48.

April 16th.—She was again allowed to awake. The movements in the legs were gone, except very slight tremors now and then. The hands also were much quieter; the left almost quite still, except on excitement. Pain still felt in stomach and back. Headache still rather bad. Appetite not very good. Bowels regular. Her mental condition was confused; she cried and made unfounded statements. She was in consequence ordered a mixture consisting of fifteen minims of nepenthe, twenty minims of orange tincture, and an ounce of compound infusion of gentian three times a day. This disturbed mental condition lasted more or less for thirteen days. She cried and was often much depressed, imagining that she had committed some great fault when she first came to the hospital. She also had fancies at times that others were talking and plotting against her. During this period, however, she menstruated, so that the mental disturbance may have been intensified and prolonged by this cause. On the 29th she was mentally clear and cheerful, but unable to recollect what had happened during the previous week. On May 8th she was quite cheerful; could walk, though not quite steadily; and could knit easily, tremor existing only to a slight extent in the right hand. Bowels regular; appetite good.

She slowly improved during the next fortnight, when she was discharged with slight tremor in the right hand only. During the whole time she was asleep her general nutrition was well maintained; her cheeks and lips continued of good colour; there was no sickness. Her tongue remained quite clean throughout, and she took her food well. The urine and motions were passed into a bed-pan, and there was never any incontinence.

In the last twelve years I have treated some eight or nine cases of chorea in this manner. Some of the cases have been notably improved; other very chronic cases, however, have not derived much permanent benefit. In none of the

cases has any evil resulted from the treatment; and previously to the present case I have never heard patients complain of headache during its continuance I have consequently never before had occasion to give bromide of potassium in combination with the chloral. This patient, however, had suffered much from headache, as well as pains in other parts of the body, for a long time before the treatment was commenced, so that the pain could not be ascribed to the chloral, and she is now, indeed, comparatively free from it, suffering only at intervals. In one other respect, also, my treatment of this case has been different from others which have preceded it. During the second period she was kept asleep for three weeks, though I had never previously allowed the time to exceed two weeks. I was tempted to prolong the period in this case, because the movements were distinctly diminishing, and the patient was taking her food well and complaining less of headache. Perhaps, however, it would have been safer had she not been kept this extra week under the influence of the chloral, even though it might have involved another two weeks' sleep after an interval for the cure of the chorea. Certainly, on awaking (although the choreic movements had nearly disappeared) she lapsed for a time into a very unsatisfactory condition mentally. She became extremely emotional and full of fancies, one might almost say delusions; but then it must be recollected that she was a very weak and unstable subject, who had probably dropped into much the same sort of condition after the accident to the child, when for many days she was, as she said, "light-headed," not knowing what she did. During part of this period she menstruated, after an interval of nearly eight months.

In the course of a few days, under the influence of treatment and careful management, she passed out of this state, assumed a cheerful and natural mental condition, and began to improve in all ways. It is worthy of note moreover, that while under our care she never had a single one of the "fainting" attacks, or fits, from which she had been suffering for the previous three years. During the whole period of the treatment the patient's general nutrition was well maintained, and the careful records which were kept of the temperature, pulse, and respiration, showed that the great vital functions were in no way affected unfavourably. On a few occasions for a short time her temperature dropped to rather a low point, but on the whole it was well maintained. During the time of actual sleep, also, the unnatural frequency of the pulse and respiration which had previously existed was kept in check. There is nothing to show, therefore, that any harmful effect was exercised upon the patient by the large quantities of chloral which she took in order to maintain sleep during these two periods of two and three weeks respectively.

But now let me say a word or two as to the kind of cases for which I consider such a mode of treatment advisable. In all ordinary cases of chorea I never think of having recourse to it. With rest and very various kinds of treatment, in the course of six to twelve weeks such cases recover. Then, again, in the most acute and severe cases of chorea, in which the temperature is raised, and the movements are violent and continuous, with or without delirium or maniacal symptoms, I have never yet tried this mode of treatment, and should not recommend its adoption. It is, I think, especially applicable to a class of cases in which there is no fever and no heart disease, but where the movements are usually severe and continuous, and have so continued for months or years without abatement. These are the cases which I consider most suitable for such a method of treatment, and it is not the less applicable should there be, as in the present instance, a possible hysteric element about the case, provided always that the movements cease absolutely during sleep. For you must not forget that the essential object of the treatment is to ensure the prolonged cessation of the unnatural movements by producing sleep. I attach little importance to any supposed curative influence of chloral itself over the chorea, except through the intervention of the sleep which it induces. This drug has been used simply because it was originally recommended for the purpose, I think, by Bouchut, and because no evil effects have followed its use. Paraldehyde, which might otherwise be suitable, has too nauseous a taste to be employed. Sulphonal might prove, however, to be quite as efficacious in procuring continuous sleep as chloral. The difficulty we have here to contend with is its great insolubility and slower action, which would probably involve a distinct lengthening of the interval of wakefulness on each repetition of the drug. Whichever medicine be used, however, the great object should be to give no more than is absolutely needed to maintain the continuous sleep, and therefore all accessory means, such as quietude, slightly darkening the room, the expeditious administration of fluid nourishment five or six times a day whenever the patient awakes, and the use of the bedpan, should be had recourse to. The period in which the patient is awake should, as far as possible, not exceed half an hour at a time.

There is another advantage attaching to this method of treating hospital patients which is worthy of mention. You will recollect that it is mentioned in the history of our patient that she was under treatment for four months in the Edinburgh Infirmary, and that for nine weeks of this time she was kept in an isolation ward. Those of you who saw the patient when she was first admitted to this hospital will recollect how greatly the movements were aggravated whenever we came to stop at her bedside to inquire into her condition. The frequent repetition of this process would certainly have been most adverse to her recovery, and had I not intended to treat her by prolonged sleep, after carefully observing her condition for a few days, I too should certainly have kept her under comparative isolation, so that she might be free from the perturbing effects of frequently seeing a number of students round her bed. By the method I have detailed to you, however, even the worst of such cases may be successfully treated in the general wards of a hospital; and I recommend it to you also as an occasional method which you may find hereafter of great use in private practice, when the aid of skilled nurses can be obtained, in the treatment of protracted and aggravated cases of chorea. Without such aid this method of treatment should never be attempted.

ABSTRACT OF

The Croonian Lectures

ON THE

RELATIONSHIP BETWEEN CHEMICAL STRUCTURE AND PHYSIOLOGICAL ACTION.

Delivered at the Royal College of Physicians of London, June, 1889,

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LECTURE III.

WE now pass from the prevention of disease to its control and cure. The power which many antiseptics possess of reducing temperature and relieving pain renders them of immense value in treatment; and the association supplies a natural link by which to pass directly to the consideration of antipyretics. Many new facts have been ascertained concerning the effects of members of the aromatic series upon the functions of protoplasm. Isolated cells, such as leucocytes, exhibit during life contraction and extension of protoplasm, which result either in locomotion and diapedesis, or are concerned in their nutrition and the manifestation of vital phenomena. Kühne showed that isolated cells have the power of absorbing oxygen, by observing under the micro-spectroscope their action upon a solution of hæmoglobin; and Pflüger by his investigations on the gases of the blood demonstrated the occurrence of oxidation and reduction in the tissues, similar results being obtained in living men by Pettenkofer and Voit; and it was found by Harley that the absorption of oxygen and elimination of carbonic acid by blood could be altered by admixture with various poisons. With these observations is associated the discovery of Binz, that quinine has the power to lessen such processes, and by so doing reduces the body temperature. Substances differ in the degree of affinity which they have for oxygen, it being greater in some and less in others. Thus it happens that we might draw up a scale containing a number of bodies, each of which would have a greater affinity for

oxygen than the one above and less than the one below it. Each one would therefore abstract oxygen from the one above it, and act as a reducing agent towards it; while it would give up oxygen to the one below it, and thus act as an oxidising agent. This affinity for oxygen is greatly altered by the reaction of the fluid in which it is exercised, so that a body having a powerful reducing action in an alkaline solution may have none at all in one which is acidulated. Processes of oxidation or reduction may also be originated by electric currents, and are particularly effective when either of the poles are composed of an oxidisable or reducible material, the process also being reversed with reversal of the current. By means of alternating currents of this sort, Drechsel has succeeded in converting carbonate of ammonia into urea, and has rendered it probable that alternate oxidation and reduction are constantly occurring within the tissues of the living body, though the exact place and manner in which they take place have still to be made out. By the introduction of various aniline compounds into the circulation Ehrlich has been able both to show that these processes go on, and that they do so with very different intensity in the different organs and tissues, occurring most rapidly in those whose functional activity is great, as in the heart, brain and muscles. The power which living cells exert in this direction is almost incredible; alizarin blue, which can only be reduced by the most powerful agents outside the body, such as by boiling with caustic potash and grape sugar, is completely reduced by the liver and cortical substance of the kidney during life, and by these organs and the muscular substance after death; the alteration being marked by more or less complete loss of colour, a change from blue to white. When first injected, alizarin blue circulates in the blue state, and colours even the serum and fluid of the anterior chamber of the eye. Most of the organs of the animals injected have a blue colour, with the exception of those just mentioned, showing that the reducing power necessary to change it from blue into white is greater than most of the tissues possess. By using indophenol blue, which is more easily reduced, Ehrlich found that reduction occurred in almost all the tissues; so that the reducing power of the cells lies between the limits fixed by these two substances. The occurrence of reduction in the tissues indicates that they are not saturated with oxygen, though they possess a sufficient amount to enable them to carry on their functions. In this respect they resemble a damped furnace, which permits slow combustion, but may at any time be excited to more vigorous action. The supply of oxygen must be very free in the heart and brain, since they do not reduce alizarin blue during life, but do so after death or under electrical stimulation. In the living protoplasm of a cell Ehrlich supposes there are three zones: one in which it is saturated with oxygen; another, functionally active, in which the degree of saturation varies; and a third, which is always unoxidised, and exerts an attraction for the oxygen of the blood or lymph. The affinity of protoplasm for oxygen may well be supposed to vary, as that of indophenol white does, according to the reaction of the surrounding fluid. This affinity is strongest in an alkaline solution, becomes much weaker in a neutral one, and in an acid is completely destroyed, so that reducing agents quickly convert the blue into white, though in an alkaline medium they have no such effect. The association of varying reaction in cells with these changes in colour of the indophenol was demonstrated by Ehrlich, by introducing another aniline colour with a delicate reaction to acidity, the reduction of the indophenol blue always occurring when an indication of acid reaction was given by the other. The process of combustion in a cell is, then, diminished or arrested by the formation of acid, though oxidation begins again as soon as the circulating fluids have restored the alkalinity. A sort of self-acting mechanism is thus exerted by the cell, inasmuch as the products of its activity are acid, so that functional exercise sets a limit to itself. A further regulating principle is afforded by the paraplasm or cell juice which surrounds the protoplasm and shuts off the latter, when contracted, from the surrounding oxygen of the blood; the supply of oxygen being reduced according as the protoplasm is contracted to a small bulk and the surrounding layer of paraplasm is thicker. If we suppose that stimulation of the thermal centres causes contraction of the protoplasm in muscle and gland cells, so that its attracting surface to oxygen would be diminished, and the resistance to the passage of oxygen through the paraplasm increased in the manner alluded to, we can see that oxidation would probably be greatly lessened and the temperature correspondingly reduced.

From the experiments of Binz upon quinine two very striking facts resulted: one, that the drug had the power to lower temperature in febrile conditions not due to malaria; the other, that quinine had an extraordinary power of arresting the movement of leucocytes, causing them to draw in their pseudopodia and contract into a sphere. That this will diminish the surface exposed to oxidation in the blood stream is obvious, though the change can hardly interpose any obstacle between the protoplasm and the oxygen contained in the surrounding serum. The case, however, is different, if we take such a structure as the pigment cell of the frog. Here the protoplasm does not always completely fill the cell; occasionally it stretches out into all the ramifications of the branches, allowing a large surface for oxidation, and being separated by a very thin layer of paraplasm from the nourishing fluid. When the protoplasm contracts, it forms a rounded mass in the centre, presenting a minimum surface for oxidation, and simultaneously a maximum thickness of paraplasm between it and the cell wall. If we suppose quinine produces a similar effect upon the cells composing the tissues of the body, we can at once see how it will lessen oxidation and act as an antipyretic; and this whether it acts directly or through the thermal centres. This hypothesis also enables us to explain the fact that antipyretics have comparatively little action upon the temperature of the healthy body, for in this state the cell protoplasm is believed to be in a state of chronic contraction, and already reduced nearly within its narrowest limits.

The variation in colour produced by contraction of pigment corpuscles in the frog has been alluded to by Edward Jenner in connexion with the occurrence of rheumatism, as well as with the swelling of dry wood under the influence of an atmosphere laden with moisture. In his poem on the signs of rain he says—

> "Hark! how the chairs and tables crack;
> Old Betty's joints are on the rack;
> The frog has lost his yellow vest,
> And in a russet coat is dressed."

The darker colour is due to the extension of protoplasm containing dark-coloured granules throughout the cell, while the yellow colour results from contraction of the protoplasm drawing the granules together into a compact clump, and allowing the yellow colour of the subjacent cells to appear. In some experiments recently made with Dr. Cash, contraction of the pigment cells was a prominent feature in poisoning by some members of the aromatic series.

The power of producing anæsthesia and abolishing reflex action is common to most of the substances of the fatty or alcoholic series, and was first noticed in connexion with ethylic alcohol, for Solomon makes the drunkard say, "They have beaten me, and I felt it not"; and apparently he determines to use it deliberately to prevent pain, for he says, "I will seek it [strong drink] yet again." The power, however, is greatly influenced by two circumstances: (1) the position of the radical in the fatty or aromatic group, and (2) the nature of the element or alkyl with which the radical is combined.

To revert here to the illustration employed in the first lecture, let us imagine a knife fastened to the end of a fishing-rod. The rod represents the radical and the number of joints indicates its position in the series. Every addition of carbon with hydrogen makes the substance heavier and more cumbrous. Petroleum ether, which is a mixture of pentane C_5H_{12} and hexane C_6H_{14}, is a light mobile fluid; higher members of the series form the soft paraffin or vaseline, while those that are higher still form hard paraffin. The instrument consisting of a fishing-rod and a pocket-knife can be altered by changing the knife as well as by altering the number of joints in the rod. So in the case of the alkyls, their action differs according as they are combined with hydrogen in the hydrides, with hydroxyl in the alcohols, or with oxygen and hydroxyl in the acids. Moreover, both the physical condition and physiological action may be changed by replacing hydrogen by other elements. Thus, if we replace the atoms of hydrogen in marsh gas, CH_4, by chlorine, with an atomic weight of 35·5, that of hydrogen being only 1, we convert the light gas with a molecular weight of 16, into the heavy liquid chloroform,

with a molecular weight of 119·5. If in place of chlorine we introduce three atoms of iodine, with a weight of 127, the molecular weight of the whole compound becomes 394, and in place of a gas or heavy fluid we get a solid, like iodoform. The physical condition of the substance may be influenced also by the number of atoms of hydrogen so replaced, intermediate substances being formed; thus monochlormethane is a gas at ordinary temperature, but can be condensed to a liquid, boiling at 22°. Dichlormethane is a heavy liquid, boiling at 41°, and trichlormethane or chloroform is still heavier, and boils at 61°. The anæsthetic, then, can be rendered denser and its molecular weight increased by replacing more and more atoms of hydrogen with heavier ones of chlorine or iodine.

All substances belonging to the alcoholic series possess the power of abolishing the excitability of the nerve centres within the body, affecting them in the inverse order of their development, destroying first the functional activity of the highest ideational and volitional centres in the cerebrum, those centres which are the latest to be developed, and which not only raise men above the animals, but raise individual men above their fellows; whilst the lowest, most simple, and at the same time most automatic centres are affected last. The perceptive and motor ganglia, the reflex centres of the cord, the vasomotor and respiratory centres, and the heart, all become eventually paralysed. They are not all rendered inactive in the same order by each member of the group. Some members, with a heavy molecule and a slight prolonged action, are useful as hypnotics; others, with a light molecule, acting rapidly and powerfully, and being quickly eliminated, are adapted for anæsthetics. The theories of their action are—(1) that they alter the blood in such a way as to render it incapable of maintaining the functional activity of the nerve cells; (2) that they alter the circulation; and (3) that they affect the nervous tissue itself. Some—such as nitrogen, nitrous oxide, and marsh gas—act by excluding oxygen from the lungs, anæsthesia occurring when the blood is quite venous. That the anæsthetic action is produced by alteration in the circulation is disproved by narcotising a frog, in which saline solution has been substituted for the blood, and in which therefore changes in the local circulation could have no effect. Changes in the circulation are, however, important in hypnotics, and anæsthesia has been induced by suddenly checking the circulation in the brain. That a frog in whose vessels salt solution is circulating can be anæsthetised shows conclusively that the condition is due to the direct effect of the anæsthetic on the nerve centres themselves, the change being supposed to be one of "transient fixation" of the albuminous molecules in the nerve elements—a change comparable to that which occurs in tetanic contraction of muscle. In connexion with this it may be stated that, while the direct application of the lower alcohols coagulates albumen immediately, the higher ones do not do so at all.

The changes produced by anæsthetics and hypnotics appear to be due to an affinity existing between the members of the alcoholic series and the nerve structures, causing the protoplasm of the ganglion cells to contract, and lessening their affinity for oxygen. The accumulation of acid also tends to reduce the activity of the protoplasm, and the presence of the halogens materially increases the anæsthetic action of the alcoholic radicals, as it also emphasises their action upon muscle. The introduction of these bodies therefore increases the risk of cardiac paralysis, whilst it increases the anæsthetic power. The choice of anæsthetics is limited to a great extent by consideration of convenience, safety, inflammability, and bulk, besides the desirability of employing a substance which is not disagreeable to smell and which does not injure the skin. In spite of their deficiency in some of these properties, chloroform and ether are practically the most useful anæsthetics we possess. Hypnotics are substances which merely cause natural sleep, from which the person can be readily awakened by external stimuli. In healthy sleep the person becomes unconscious to the external world, voluntary action ceases, and even the automatic centres for the respiration and circulation act less energetically, so that the breathing becomes slow, the pulse quiet, and the vessels tend to dilate. This dilatation may be so well marked that it causes the feet to swell, and renders a pair of well-fitting boots too tight. At the same time, it makes one more liable to be chilled by exposure to external cold. The two principal theories to explain sleep are: first, that it depends upon anæmia of the brain; and, secondly, that it is due to an exhausted or inactive condition of the brain cells. The latter is most probably true, though the condition of the cells is much influenced by the state of the circulation. Arterial blood neutralises the acid resulting from functional activity, and gives off oxygen to the brain cells. Thus, in some conditions of the brain simple increase in the supply of arterial blood will restore functional activity and produce wakefulness, while diminished supply will produce sleep. The effect of position has been shown by Friedländer in a research on the hypnotic properties of isopropyl alcohol. If the animal experimented upon were held up by the legs, so as to increase the blood-supply to the head, it at once awoke; but when held up by the ears it fell asleep. The same effect of the circulation is seen in debilitated subjects, who tend to fall asleep standing, or especially sitting down, and yet are very wakeful in the horizontal position. The influence of disturbance of the circulation is also seen after taking food, many people tending to fall asleep after a hearty meal, owing to the dilatation of the gastric and intestinal vessels drawing away blood from the brain. External cold also, unless very intense, acts in the contrary direction, and, by contracting the vessels in the skin and even in the intestines, drives the blood to the brain and prevents sleep. In high blood tension, as in Bright's disease, we often find troublesome insomnia, whilst in cases of debility with low tension there is often persistent drowsiness. The condition of the circulation is, therefore, a most important factor in the production of sleep, but it will by itself no more explain completely the insensibility of sleep than it will that of anæsthesia. As Ehrlich has shown, the acid products of functional activity tend to lessen the power of the cells to absorb oxygen; but it is highly probable that other products of tissue change, whether arising in the brain or in other parts of the body, have a similar power upon the brain cells. At all events, Bouchard has found that the toxic substances excreted in the urine during the day have a soporific action, while those excreted during the night have a stimulating action. It would thus appear that there is a sort of self-regulating mechanism in the body by which sleeping and waking are made to alternate. Now Voit found that during the waking hours more carbonic acid is given off, while during sleep the reverse is the case, and more oxygen is absorbed than carbonic acid eliminated. It is therefore evident that during waking the organism as a whole is an oxidising agent, while during sleep it is acting as a reducing agent. The stimulating action of such substances as cocoa, tea, and coffee would lead us to regard them as belonging to the class of products formed during sleep. In the early part of the day we might reasonably expect that the substances formed in the body would have no narcotic action, whereas later on the more completely oxidised products of waste would gradually assume a more and more soporific character. And this being so, we might naturally expect that by oxidation of some of the stimulant substances mentioned we might obtain products having a narcotic action. This is the case, at least, with caffeine, for in hydroxy-caffeine the stimulant action is less powerful. Caffeine-methyl-hydroxide is neither a stimulant nor narcotic, whilst ethoxy-caffeine acts altogether as a soporific. It will be noticed that the last mentioned, ethoxy-caffeine, is a compound of a radical belonging to the alcoholic series with one in which ammonia plays a prominent part. These two constituents are examples of two classes of soporifics: 1. Substances belonging to the alcoholic group. 2. Substances allied to urea or uric acid.

Hypnotics may probably lessen the functional activity of the brain cells—(1) by causing their protoplasm to contract, and so interposing a barrier of paraplasm between it and the oxygen of the blood; and (2) by lessening the affinity of the cells for oxygen by diminishing their alkalinity or by acting in direct combination with them, and so altering their chemical relationships. The products of brain-waste appear to be of an acid nature, and therefore lessen oxidation; but lactic acid, resulting from muscular exertion, may equally find its way into the circulation and have a similar effect. Another and final product of tissue-waste is carbonic acid, and this likewise has a soporific and anæsthetic action. The convulsions which occur in asphyxia are more truly referred to absence of oxygen than to the presence of carbonic acid, the deprivation in cases of suffocation producing in a few minutes intense stimulation of the

nerve centres, while the lessened oxidation occurring in sleep has a similar but much slighter effect in the course of several hours. It is probable that, in both cases, the stimulation—which gives rise in the one case to waking, and in the other to convulsions—is immediately caused by products of tissue-waste. The drowsiness which results from sitting in close rooms and churches, though partly referable to external warmth, is, in large measure, due to the presence of carbonic acid and volatile poisons from the lungs and skin.

The narcotic power of the alcohols increases as we ascend the series, as does also the number of possible isomeric compounds. There are three divisions of alcohols: (1) Primary, (2) Secondary, and (3) Tertiary, according as the carbon atom to which the hydroxyl is attached is united to one, two, or three radicals. Tertiary amyl alcohol, amylene hydrate, was recommended as a hypnotic by Schmiedeberg, and has been introduced into practice by von Mering. It is said to be intermediate between chloral and paraldehyde, safer than either, and not disturbing to the digestion. The next member of the series, hexyl, may yield thirty-eight alcohols, and thirteen of these are actually known, so that the possible field for the introduction of new hypnotics is very large. The ethers, for the most part, are too volatile and their effects too transient to be of much service as hypnotics. Sulphonal: Diethyl-sulphon-dimethyl-methane appears to be one of the most effective of all the newly introduced hypnotics, and although it does not, like morphine, compel sleep, it induces sleep in a pleasant manner, and has few disagreeable after-effects, and little or no danger. Paraldehyde: Ethylic aldehyde unites with itself, their molecules combined forming paraldehyde. A greater number in combination form metaldehyde. Though simple aldehydes are intensely irritating to the mucous membranes, these polymeric forms are much less so, and paraldehyde forms a useful hypnotic, which does not depress the heart's action or give rise to subsequent discomfort. The chief objection is its unpleasant smell, which remains about the patient for many hours. Ketones: In these the group CO is the connecting link between two radicals. When both radicals are methyl we have acetone, which has been found in the blood of diabetics, and has been supposed to give rise to diabetic coma. By substituting other radicals for methyl, numerous other ketones are produced, which form a long series of hypnotics. The other class of hypnotics, allied to urea, in which nitrogen may be said to form the basis, is obtained by uniting carbamic acid ($CO\,NH_2\,HO$) to an alkyl, so that the stimulating effect of ammonia is associated with the narcotic action of the alkyl. The ethyl compound, called urethane, is a useful hypnotic, though not so powerful as chloral. Unfortunately the higher members of this series are not sufficiently soluble to be active medicines.

Local Anæsthetics.—It is often convenient to annul pain in some particular region, without producing general anæsthesia. For some time the effect of cold has been utilised, either by the use of ice and salt, or, more conveniently, by the evaporation of a volatile spray, such as that of anhydrous ether, or, better still, a gas liquefied by cold and pressure, such as chloride of methyl. Another plan is to employ some drug which possesses the power of producing anæsthesia, such as carbolic acid or the allied substance, paracresol. From one of the decomposition products of cocaine, ecgonine, which has no anæsthetic action, cocaine itself can be built up by combination with benzoyl and methyl. In a similar way a compound of tropine, itself destitute of anæsthetic power, with benzol produces the local anæsthetic homatropine. Filehne, suspecting that the anæsthetic property resided in the benzoyl, has found that the benzoyl derivatives of several substances have a marked anæsthetic action. Unfortunately, however, many of them produce a primary irritant action, which renders them inadmissible as local anæsthetics. The same is true of most of the cardiac poisons, like digitalis, which has a similar local action.

MATER MISERICORDIÆ HOSPITAL, DUBLIN.—The following have been awarded prizes:—Leonard Prizes—First Medical Gold Medal: Matthew B. Savage. Second Medical Silver Medal: John McNamara. First Surgical Gold Medal: Not awarded. Second Surgical Silver Medal: Matthew B. Savage. A special prize (Silver Medal) was awarded to Richard Smyth for the high marks obtained by him in Medicine.

SURGERY AS PRACTISED IN TURIN.[1]

BY PROFESSOR HUMPHRY.

SURGERY in Turin, as represented by Signor Carle at the Ospedale Mauriziano, Signor Caponotto at the Ospedale S. Giovanni, and Signor Raymond at the Ospedale Ottalmico, is of very high order.

The Mauriziano Hospital, on the outside of the town, has been recently built, at a cost of £120,000, with the effort to present all modern improvements. It contains 200 beds, equally divided between medical and surgical patients, who are disposed in four long wards, two for men and two for women; and there are several smaller wards for patients of rather higher class, who pay a certain sum, and are attended by the same medical and surgical officers as the other patients. Each of the surgical wards has at the end, shut off by folding doors from the rest of the ward, a spacious and abundantly lighted room, in which the dressing of the wounds is conducted. The bedsteads, upon castors or placed on tressels, are wheeled in and out of this room, and the wards are thus freed from the impurities attendant upon the dressing of wounds. There is also ample ward space, windows on the two sides, and the beds, each between two windows, are placed at a distance of several feet from the walls. The floors of the wards, however, are of pine, not very good or well laid, and already show much staining. The waterclosets and urinals, in projections from near the middles of the wards, admit of improvement. Professor Carle is the chief surgeon, having all the surgical patients under his charge, and, with a good staff of assistants, performs operations of all kinds. One patient was recovering from supra-pubic lithotomy, and another from rhinoplasty (the nose having been formed from the forehead); one from removal of the vertebral arches at the seat of fracture, which had been attended with some benefit; others from osteotomy, amputation of the mamma, other amputations, &c. The operations on women are, however, those which most interest the Professor. One woman was recovering from supra-pubic removal of the uterus and ovaries, the pedicle, transfixed and girt by elastic ligature, being external; two were recovering from removal of sarcoma of the ovary. He told me that he had removed the uterus by the vagina for cancer eighteen times, with only two deaths. I saw this operation, the details of which give a good idea of the method pursued in conducting the operations here. Professor Carle and his assistants, dressed in long linen coats, occupied themselves at least a quarter of an hour in making their toilette, washing the hands many times with hot water and soap, cutting and cleaning the nails, and soaking them in sublimate fluid (1 in 5000). The chamber was heated to about 80° by hot air. The woman, already washed, was brought in quite naked, under chloroform, and subjected to thorough washing and injection of the vagina and surroundings with the sublimate. She was then taken into an adjoining room, in which operations are performed upon suppurating and septic cases. Here the carcinomatous disease of the os uteri was scraped away with Volkmann's spoons and other instruments; and, after syringing and drying, Paquelin's cautery was freely applied, the object of this being to ensure an antiseptic condition of the part. The woman, still under chloroform, was taken into the third room, a spacious and well-lighted room, where cases primarily antiseptic—for ovariotomy, laparotomy, &c.—are operated on. After renewed sublimate washing of the surgeon's hands and patient's vagina, the os uteri having been drawn down with vulsellum forceps, an incision was carefully made into the peritoneal cavity between the bladder and uterus, a sublimated sponge in locked forceps pushed in, the fundus of the uterus pulled out with the finger and vulsellum, the lateral connecting structures ligatured piecemeal with silk passed by means of curved needles in porte-aiguilles, and divided with scissors; and, finally, the structures between the uterus and rectum being divided also with scissors, the uterus was removed. The parts having been thoroughly washed with the sublimate solution and sponged, the peritoneal surfaces were sutured by means of the curved needles and the porte-aiguilles, which seemed to be the most tedious and

[1] Paper read at a recent meeting of the Cambridge Medical Society.

difficult part of the proceeding; and when all was well cleared and dried the vagina was plugged with sublimated compresses and iodoform dusted over it. I saw also an ovariotomy, the same precautions being used as in the former case. The tumour was a firm, very fixed mass, as large as a child's head, which Signor Carle thought it probable he would not be able to remove; but he deemed it best to operate, as it was a source of much trouble and pain. A free incision into the abdominal cavity, extending above the umbilicus, disclosed a thick-walled cyst extensively adherent in the pelvis. It was accordingly punctured, and, the fluid having been withdrawn, was freely laid open, and some papillomatous matter in the interior removed. The peritoneal surfaces of the sac and the abdominal walls were united by continuous suture, the edges of the sac and the skin united by sutures passed through the thick wall of the sac and the abdominal wall, the abdominal cavity carefully cleared by sublimated sponges held in long-bladed locked forceps, the sac plugged with iodoform compresses, iodoform sprinkled all over, and the whole covered with cotton-wool and bandages. Two days afterwards the woman was doing well.

In the Ospedale S. Giovanni, which contains 600 beds in the large long cruciform wards, with an altar at the intersecting point, and tiled floor, common on the Continent, I accompanied Signor Caponotto in his morning round, which occupies him commonly from 7 A.M. till 12, 1, or even 2 P.M., and saw cases recovering from ovariotomy (two); removal of tongue (submental); Dupuytren's operation for artificial anus (two); laparotomy for abdominal obstruction; trephining of mastoid process of temporal bone (two); urethrotomy for traumatic stricture; divers amputations, &c. He usually operates at 10 A.M. He did an osteotomy for ill-set fracture of the leg in a man, similar precautions as regards washings of hands and of the patient's limb and use of the sublimate in cleaning the wound and the dressings being adopted as at the Mauriziano. Chloroform is always given in Turin in preference to ether. Signor Caponotto told me that although it was administered several times daily in that hospital, and although no particular precautions were used—indeed it was often administered by students,—a fatal result had occurred only once. In somewhat extensive observation of European hospitals, I do not know that I have ever seen better surgery, more care in antiseptic precautions, more general attention in dressing &c., or better results, than in the hospitals of Turin, or that I have met men more equal to the various requirements of operative surgery than Signori Carle and Caponotto, and who give more time to their work. The latter informed me that he has no remuneration; the former receives 1000 francs per annum. The clinical instruction is given in the S. Giovanni by the professors. Professor Bruno lectured at length on each of two cases, a simple fracture of the leg and a common hydrocele, the greater number of the crowd of students neither seeing nor hearing anything. One could not but feel that some of them would have been better occupied in accompanying Carle or Caponotto, who were attended only by their assistants, and that this sort of division of labour was not quite satisfactory as regards teaching.

In the Ospedale Ottalmico, which is furnished with laboratory, museum, and all appropriate appliances, I saw extraction of cataract without previous iridectomy (a good circular pupil remaining), iridectomy, and other operations performed by Signor Raymond as well as I have seen them at Moorfields or elsewhere. Antiseptic precautions are here also used, the carbolic spray being employed. The hands of the operator and assistants were scrupulously washed, the sublimate water was poured over the eye, the instruments, chiefly purchased in London, were in antiseptic fluid, and iodoform, fine and carefully prepared, was dusted upon the eye after the extraction of the cataract and after some other operations.

I came to the conclusion that some of our students, after obtaining their diplomas (it is, I am sure, best to remain at the British schools till that has been done), might very advantageously spend a short time in the clear, bright, healthy, happy town of Turin, where they will have the opportunity of seeing quietly and well a greater variety of cases well treated by individual surgeons than in the more reputed and more crowded hospitals of Vienna, Berlin, or Paris. By so doing, in this and some of the other large continental towns, they might also obtain and communicate to us in England better information respecting details and general treatment and results than it was possible for me to do in my short visit this spring. Such information would be of more value than that gained at the International Congresses; at any rate, it would be a highly important supplement to them.

Cambridge.

CRANIO-CEREBRAL TOPOGRAPHY.

BY WILLIAM ANDERSON, F.R.C.S.,
AND
G. H. MAKINS, F.R.C.S.

THE earliest of the serious attempts to demonstrate the relation of the brain convolutions to the cranium was that of Broca,[1] and his researches have been followed by those of Bischoff,[2] Turner,[3] Féré,[4] Pozzi,[5] Giacomini,[6] Ecker,[7] Hefftler,[8] Hare,[9] R. W. Reid,[10] Horsley,[11] and Cunningham.[12] The experiments of these observers may be classified into three principal groups. In the first, led by Broca, the cranial sutures were exposed, punctures were drilled at certain points in their course, and pegs or pins of wood or metal were introduced into the brain through the apertures; the more important relations of the convolutions to their bony case were thus laid down in a manner that involved no material source of fallacy beyond the variability of position of the sutures themselves in their relation to the cranium as a whole. In the second group various parts of the brain were exposed by removal of its investments, the organ having in some cases been prepared for the experiment either by injection of its vessels (Hefftler) or by freezing (Féré). Thus Turner, having removed portions of the frontal, parietal, occipital, temporal, and sphenoid bones, left a number of regions (occipital or post-lambdoid, frontal or pre-coronal, antero-parietal or post-coronal, post-parietal or pre-lambdoid, and squamoso-sphenoidal) bounded either by sutures or by arbitrary lines, and each containing certain convolutions or portions of convolutions. Hefftler prepared a series of casts of different segments of the head (anterior, superior, and posterior), then of the corresponding portions of the bony cranium and of the brain. Lastly, Cunningham, having prepared the brain by a special process in such a manner that when exposed *in situ* it would remain absolutely unaltered for at least twenty-four hours, removed portions of the bone on one side, leaving narrow bars of the cranial wall in the lines of the sutures and temporal ridge. Moulds were taken, and from these were prepared the valuable series of models recently exhibited at the Royal Academy of Medicine in Ireland, and at the Anatomical Society of Great Britain. The third group, the most important for the surgeon, includes the various endeavours to localise the principal brain fissures by means of certain lines and admeasurements marked upon the shaven scalp. In these researches it was of course necessary that certain recognisable starting points for the lines or measurements in question should be defined upon the surface of the cranium and all parts of the skull that could be made available for the purpose—the glabella, the external occipital protuberance, the external angular process, the zygoma, the mastoid process, the frontal and parietal eminences, the temporal ridges, the external auditory meatus, the borders of the orbit, and the coronal and lambdoid sutures—have been utilised in one or other of the three chief systems—that of the French school (Championnière and others), of Reid, and of Hare,—to which surgeons already owe a debt of gratitude.[13]

There is no doubt that by any of these carefully elaborated methods the brain points sought for could be exposed in the greater number of cases by a trephine of an inch in diameter, but there will be found in each plan certain disadvantages which render it occasionally untrustworthy.

[1] Bulletins de la Société Anatomique, [illegible].
[2] Die Grosshirnwindungen des Menschen. München, 1868.
[3] Journal of Anatomy and Physiology, vol. viii., pp. 142-369.
[4] Bulletins de la Société Anatomique, 1875; and Archives de Physiologie, 1876.
[5] Archives Générales de Médecine, 1877.
[6] Topografia della Sciasura di Rolando. Torino, 1878.
[7] Archiv für Anthropologie, vol. x., 1876-78.
[8] Ibid. p. 243.
[9] Journal of Anatomy and Physiology, Jan. 1884, p. 175.
[10] THE LANCET, Sept. 27th, 1884.
[11] American Journal of the Medical Sciences, 1887.
[12] THE LANCET, May 26th, 1888.
[13] Reid's diagram will be found in THE LANCET, vol. ii. 1884, p. 539; that of Hare in vol. i. 1888, p. 409.

Thus, in the French system, the bregma is adopted as the fixed point by which the upper extremity of the fissure of Rolando (carried as far as the middle line) is to be discovered; but the coronal suture is variable in its relations to the rest of the cranial walls within limits which, though small ($\frac{2}{3}$ in.), are sufficient to introduce an undesirable source of error, and in a certain number of heads, perhaps one in every five or six, the ridge or depression commonly present at this spot is not perceptible through the scalp. The indications for the inferior extremity of the same sulcus, again, are inelastic, and, although probably accurate for crania of a certain type, would be more or less incorrect in other cases. The same may be said for the points indicating the fissure of Sylvius. In the systems of Reid and Hare the indications for the localisation of the different parts of the fissure of Sylvius present material differences, and in both the parietal eminence is adopted as a landmark for the termination of the sulcus (Reid $\frac{3}{4}$ in. below, Hare at the most prominent point), although the most central point of the boss is often hard to define, and in any case its position is subject to a variation of an inch in the horizontal and nearly half an inch in the vertical direction.[14] The fissure of Rolando in Reid's method is found by two lines running perpendicularly upwards from a base line (which passes through the lower margin of the orbit and the external meatus) at points corresponding to the pre-auricular depression and the posterior border of the mastoid process; but, apart from the practical difficulty of erecting perpendicular lines upon a curved surface, it may be noticed that the posterior border of the mastoid process is seldom well defined, and that the breadth of the process varies to the extent of $\frac{3}{4}$ in., and under conditions which bear no reference to cerebral development. In Hare's system, the upper extremity of the fissure is found by a plan almost identical with that previously formulated in the last edition of Quain's Anatomy, and against which no objection can be raised, since it adjusts itself well to the varying size of the brain case. From this point the course of the sulcus is found by a line forming an angle of 67° with the sagittal line, and running downwards and forwards for a distance of $3\frac{3}{4}$ in.;[15] but it is not very easy to measure angles upon an irregularly curved surface, and the plan is, moreover, open to objection on the score of inelasticity. The external parieto-occipital fissure is placed by most observers beneath or near the apex of the lambdoid suture; but it may be shown that this, as an external landmark, has the same defects as the bregma. Mr. Reid, however, while recognising the relation of the sulcus to the suture, prefers to discover the position of the former by prolonging the Sylvian line to the sagittal line—a procedure which necessarily includes any defects that may belong to his method of tracing the fissure of Sylvius. A few other points for criticism might be raised, but the following tabulated list of indications given by different authorities for the position of the principal fissures will, perhaps, lay the matter before the reader in the shortest and most comprehensive manner.

1. FISSURE OF SYLVIUS.
   (α) *"Commencement":*
   - Champonnière: 3 cm. behind external angular process, and 5 cm. above zygomatic arch.
   - Hare: In the course of a line from external angular process to occipital protuberance, and $1\frac{1}{2}$ in. behind the process. Deviation in 17 heads, $\frac{1}{2}$ in.
   - Reid: $1\frac{1}{4}$ in. behind external angular process.

   (β) *Point of bifurcation:*
   - Thane and Godlee (Quain's Anatomy): $1\frac{1}{4}$ in. behind and $\frac{1}{4}$ in. above external angular process.
   - Hefftler: 1·3 cm. behind coronal suture and opposite spheno-squamosal suture.
   - Ecker: Corresponds to coronal suture, or not more than a few millimetres behind.
   - Reid: 2 in. behind and slightly above external angular process.
   - Merkel: 5 cm. to $4\frac{1}{2}$ cm. perpendicularly above middle of zygoma.
   - Hare: The ascending limb is described as corresponding to the squamoso-sphenoidal suture, but its point of commencement is not localised.
   - Horsley: 1 to 2 millimetres anterior to spheno-squamous suture, midway between stephanion and zygoma.

   (γ) *Course of posterior limb:*
   - Broca: Opposite level of squamo-parietal suture, and hence about 5 cm. above zygomatic arch.
   - Reid: A line commencing 2 in. behind and a little above external angular process, and extending to a point $\frac{3}{4}$ in. below centre of parietal eminence.
   - Seguin: Along line from external angular process to tip of lambda (corresponding closely to Reid's line).
   - Hare: A line from commencement of fissure (see above) to centre of parietal eminence.
   - Horsley: Commencing midway between stephanion and zygoma, extends along squamo-parietal suture nearly up to parietal eminence. The squamo-parietal suture lies at junction of middle and superior thirds of line from temporal ridge to zygoma, just anterior to temporo-maxillary articulation.

2. FISSURE OF ROLANDO.
   (α) *Upper extremity:*
   - Broca, Championnière, Féré, and others: $4\frac{1}{2}$ cm. to 5 cm. behind bregma. Distance never exceeds 5·7 cm., but there is great variation in pathological conditions.
   - Thane and Godlee: $\frac{1}{2}$ in. behind middle of a line drawn from the root of the nose to the external occipital protuberance.
   - Hare: 55·7 per cent. of distance between glabella and external occipital protuberance.
   - Reid: Touched by the upper end of a line drawn from the posterior border of the mastoid process perpendicularly to a base line extending from the lower border of the orbit through the middle of the external auditory meatus.
   - Merkel: Touched by the upper end of a line drawn in a direction perpendicular to the zygoma from the posterior border of the mastoid process.
   - Seguin: A line corresponding closely to that of Reid and Merkel, but drawn perpendicular to a base line extending from the cusps of the upper teeth to the tip of the mastoid process. (A modification of Féré's alveolo-condylar plane.)

   (β) *Lower extremity:*
   - Féré: $2\frac{1}{2}$ cm. to 3 cm. behind lower extremity of coronal suture, which lies 15 mm. to 20 mm. behind external angular process at the level of the superciliary ridge.
   - Championnière: A point 7 cm. behind and 3 cm. above external angular process.
   - Thane and Godlee: About 1 in. behind bifurcation of fissure of Sylvius (see above).
   - Reid: Touched by a line carried at right angles to the base line (see above) from the pre-auricular depression.
   - Seguin: Touched by a line drawn perpendicular to the alveolo-condylar plane through the middle of the external auditory meatus. This line reaches the bregma above (auriculo-bregmatic line).
   - Merkel: Touched by a line drawn perpendicular to the zygoma through the temporo-maxillary articulation.

   (γ) *Direction of fissure of Rolando:*
   - Giacomini: A line drawn at right angles to the sagittal line from the greatest transverse diameter of the head (measured with calipers) cuts the fissure of Rolando nearly in the middle, and the decussation lies exactly midway between the sagittal line and the point of the greatest transverse diameter. The fissure forms an angle of 115° to 125° with the vertical line (or 55° to 65° with the sagittal line). Crania examined were all of strongly brachycephalic type.
   - Hare: Course of fissure indicated by a line passing from its upper extremity (see above) downwards and forwards at an angle of from 60° to 73° (average 67°) with the sagittal line.

3. EXTERNAL PARIETO-OCCIPITAL FISSURE.
   - Féré: Summit of lambdoid suture: exactly in 35 cases, 1 to 4 mm. anterior in 17 cases, and 2 to 3 mm. behind in 2 cases. (Subjects examined all women, mostly over sixty, and forming part of the clinique of M. Charcot.)
   - Hefftler: usually opposite to summit of lambdoid suture.

[14] See table in Journal of Anatomy and Physiology, 1889, p. 465.
[15] This angle was first estimated by Giacomini, who found it to range between 55° and 65° (115°–125° in the vertical line).

Hare: 1½ in. to 2¼ in. (average 1⅞ in) from upper extremity of fissure of Rolando, ⅝ in. anterior to lambda.

Thane and Godlee: Summit of lamboid suture, 2 in. to 3 in. from external occipital protuberance.

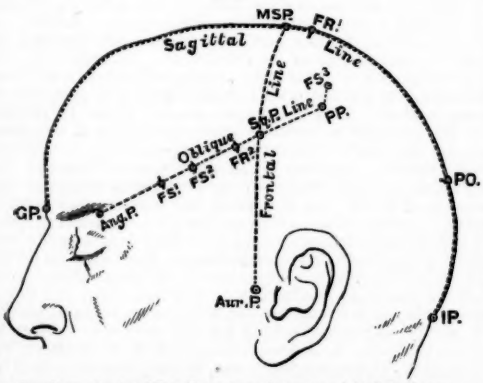
Reid: Posterior extremity of line continued from fissure of Sylvius to sagittal line.

Merkel: Beneath or a few millimetres behind summit of lambdoid suture (about 6 cm. above external occipittal protuberance).

Horsley: 2 mm. to 3 mm. anterior to apex of lambdoid suture.

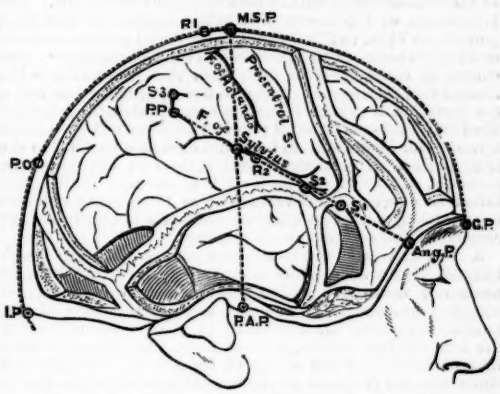
The details of the system we venture to propose will be found in the current issue of the *Journal of Anatomy and Physiology*. It will be sufficient here to state that the principal researches were carried out by means of experimental punctures made at certain points previously marked upon the scalp, and that the subjects were twenty in number—fourteen men, three women, and three children (aged two and a half, eight, and fourteen),—but, as both hemispheres were examined in each case, the total observations for each fissure may be taken as forty. Broca's method was adopted in preference to any other, because in this the relations between brain and cranial wall are in no way disturbed, and if the point of perforation be carefully fixed there is no reasonable probability of errors of observation. A supplementary set of examinations dealt with the relation of certain of the cranial sutures, eminences, &c., to the skull as a whole, with a view to determine the range of variation of the landmarks hitherto employed in cerebral localisation. The main general deductions from the experiments were: firstly, that the normal variability of the fissures is very considerable in different subjects, and even on the two sides of the same brain, and it is only by finding the mean of the variations that the best position for the application of the trephine can be calculated; and secondly, that the positions of the various sutures, eminences, and ridges are not entirely or equally trustworthy as indications of the localities of the cerebral convolutions, as the former may vary under conditions that have no influence upon the latter. This being stated, it is only necessary to refer to the diagrams showing the plan of construction of our cranial chart, and the relations to it of the more important cerebral sulci. (See Figs. 1, 2.)

FIG. 1.



Cranio-cerebral guiding lines, traced upon a cast of Professor Cunningham's (from a photograph). GP, Glabellar point; glabella opposite superior border of orbit. IP, Inial point, at external occipital protuberance. MSP, Mid-sagittal point; midway between GP and IP. Ang.P, Angular point; external angular process opposite upper border of orbit. Sq.P, Squamosal point; intersection of oblique and frontal lines at junction of middle and lower thirds of latter. PP, Parietal point; termination of oblique line, equidistant with FS² from squamosal point. Aur.P, Pre-auricular point; depression in front of tragus, at level of upper border of external auditory meatus. FS¹, "Commencement" of fissure of Sylvius, ⅓ths of distance from Ang.P. to Sq.P. FS², Bifurcation of fissure of Sylvius, ⅓ths of distance from Ang.P to Sq.S. FS³, Termination of fissure of Sylvius, ½ an inch above PP, in a direction parellel to frontal line. FR¹, Upper extremity of fissure of Rolando carried to sagittal line in direction of fissure, ⅝ths of an inch behind mid-sagittal point. FR², Lower extremity of fissure of Rolando carried to oblique line in direction of fissure, ⅝ths of an inch in front of squamosal point. PO, External parieto-occipital fissure, carried to sagittal line in direction of fissure, ⅓ths of distance from MSP to OP.

FIG. 2.



Outline traced from a photograph of a cast of Professor Cunningham's. For references see Fig. 1.

It will be noticed that the standard points are few, and are liable only to a very small degree of variation in different subjects; that the frontal and oblique lines by which the course of the fissures of Rolando and Sylvius are mainly indicated undergo changes of length and direction in association with variations in the size and form of the skull, and are hence applicable for heads of all dimensions and types, and appear to be adaptable for children as well as adults; and that the test points in the course of the different fissures are measured as far as possible in fractions of the length of the lines, and not in inches and centimetres, in order to secure a similar adaptation to crania of all dimensions. This rule is departed from only in the case of the two extremities of the fissure of Rolando, where the necessary adaptive changes are sufficiently secured by the shifting of the frontal line.

The following indications may now be quoted from our paper in the *Journal of Anatomy and Physiology*:

1. *Fissure of Rolando.*—The upper extremity, carried for convenience of admeasurement as far as the longitudinal fissure (in line of the sulcus), was found to lie in all cases between the mid-sagittal point and a point three-quarters of an inch behind it. Its distance behind the mid-sagittal point, however, bore no constant relation to the length of the sagittal line, and hence the central spot for the application of the trephine may be most safely fixed at three-eighths of an inch behind the mid-sagittal point. The superior connecting gyrus between the pre-central and post-central (ascending frontal and parietal) convolutions occasionally appears only on the mesial surface of the hemisphere—in this case the fissure of Rolando actually reaches the longitudinal fissure. The lower end of the sulcus, carried into the fissure of Sylvius, lies in the squamosal line between the junction of this line with the frontal line (squamosal point), and three-fourths of an inch in front of this. The centre of the trephine may hence be applied, in the squamosal line, three-eighths of an inch in front of the squamosal point. In four instances the sulcus really joined the horizontal limb of the Sylvian fissure. The angle formed, with the upper border of the hemisphere, by a line connecting the two extremities of the fissure of Rolando, in eight cases was found to range between 55° and 70°, in twelve out of the sixteen fissures falling between 60° and 65°. The course of the fissure is extremely capricious, and tracings taken from opposite hemispheres often differ considerably from each other. (See illustration in *Journal of Anatomy and Physiology.*) A strong curve with a backward convexity is not unfrequently met with in the upper third, and a second smaller curve in the opposite direction may sometimes be found near the lower extremity of the sulcus.

2. *Fissure of Sylvius.*—The place at which the frontal and temporo-sphenoidal lobes appear to separate when seen from the lateral aspect of the brain—the so-called "commencement of the fissure of Sylvius"—can scarcely, from its very nature, be fixed with complete exactness, but it may be computed with sufficient accuracy for all practical purposes. It was found to lie in the squamosal line between 1⅛ in. and

1½ in. behind the external angular processes, or about $\frac{4}{12}$ths of the distance between the point and the frontal line. The bifurcation of the fissure lies in the squamosal line at a point from 1½ in. to 2 in. behind the external angular process, or at $\frac{7}{12}$ths between this process and the frontal line.[16] The course of the horizontal limb from the bifurcation to the frontal line corresponds closely to the squamosal line and a continuation of this backwards for an equal distance behind the frontal line (to parietal point in diagram), it then turns upwards for about half an inch in a direction parallel to the frontal line. The mode of termination of the fissure is, however, so uncertain, that a circle of an inch in diameter failed to cover all the variations in the twenty subjects examined by us. The parietal eminence is nearly always closely related to the point in question.

3. The *external parieto-occipital fissure* joins the longitudinal fissure at a point averaging $\frac{7}{12}$ths of the distance measured from the mid-sagittal point to the external occipital protuberance, and lies near to the apex of the lambdoid suture. In operations in the neighbourhood of the longitudinal fissure, it is of course necessary to take into consideration the width of the superior longitudinal sinus and its frequent deviation towards the right side in the posterior half of its course. An endeavour was made to ascertain the average positions of the superior and inferior frontal fissures, but these were found to be so irregular in their course as to baffle all attempts to secure indications of any value.

As a practical point it should be mentioned that the mobility of the integumental structures covering the cranium may lead to a misplacement of the trephine aperture, and to obviate this source of error it is desirable to pierce with a strong needle or pin the soft parts at the centre of the spot marked for investigation, and fix the point of the instrument in the bone before making the incision for the exposure of the required portion of the skull cap. The small depression in the outer table will then serve for the application of the pin of the trephine.

A CASE OF

RAYNAUD'S SYMMETRICAL GANGRENE IN A PATIENT SUFFERING FROM CONSTITUTIONAL SYPHILIS.

WITH SOME REMARKS ON THE HISTORY, NATURE, AND MANIFESTATIONS OF THE DISEASE.

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(*Continued from page 11.*)

IN studying the history of symmetrical gangrene, and in endeavouring to investigate its etiology, I have been struck with the conparative rarity of the affection. In the excellent library of the Manchester Medical Society, containing about 30,000 volumes, a library rich alike in English, American, and foreign medical literature, I have not been able to discover more than ninety-three examples of this disease. Indeed, many experienced hospital physicians have never seen a well-marked case of symmetrical gangrene. How is the rare occurrence of so characteristic a disorder to be explained? Some light may, I believe, be thrown on this difficult subject by a consideration of the sort of abnormal relationship which in certain curiously constituted individuals seems to exist between the cerebro-spinal and sympathetic systems, between the voluntary and involuntary nerves. The most remarkable example of such an abnormality is probably the well-known case of Colonel Townsend, who by the exercise of his will was able to stay the movements of his heart and of his lungs, and to simulate death with such completeness that experienced medical witnesses believed in the reality of his dissolution. His case is reported by Dr. Cheyne in a quaint old work entitled "The English Malady," published in 1733. I find also in the fifth volume of the *American Medical Record* a case recorded by Dr. Meredith Clymer, where the patient by the force of his will could produce at pleasure a blanching of the entire cutaneous surface (cutis anserina), with loss of heat. Again, Dr. Druitt[1] maintains that psychical disturbances are at times sufficient to induce attacks in a sensitive person, where such attacks are usually induced by cold. Dr. Colcott Fox also refers to a woman who frequently experienced paroxysms of local asphyxia. In reference to her case, it is stated that her extremities "go blue" in a second if she is startled by a sudden knock at the door or any unusual occurrence. Raynaud too refers to a case recorded by Lamotte. A billiard marker received a blow from a stick on the outer part of his right arm. There was severe pain; the hand became cold, pale, and insensible. The morning after, Lamotte made many cuts with the lancet without the patient perceiving it; he even cut across the hand without a drop of blood escaping. His hand remained in the same state during ten days. At the end of that time a little heat returned, then the arterial pulsations, which had been suppressed, reappeared, and the functions of the part were gradually re-established. Raynaud further refers to Volvius, who reports a case in which a similar state appeared following a violent fit of passion, and lasting eight or ten days. In two of the instances I have here adduced, the circulation in the extremities was to a considerable extent influenced by the will. This subjection of the vaso-motor nerves to the higher cerebral centres is extraordinarily rare, and very few examples of it are to be found in medical literature. In three of the other cases the spasmodic contraction of the arterioles was found to depend on strong emotional influences—in one case the emotion of passion, and in the other two the emotion of fear, inducing a closure of the vessels. Anomalous cases such as these teach us that there are constitutional peculiarities in certain individuals which render them abnormally susceptible to impressions which in the vast majority of persons would pass wholly unheeded. A very large proportion of those who have suffered from Raynaud's disease are described as emotional and excitable—men and women in whom the neurotic element is in the ascendant. A study of the cases which have been recorded points to this unstable equilibrium of the nervous system as a potent predisposing factor in the pathogenesis of the disease. Still, I am disposed to believe that vascular spasm, even though maintained for a considerable time, is not by itself alone sufficient to induce gangrenous destruction in the extremities. It may, no doubt, and in countless instances does, induce local syncope, and far more rarely local asphyxia, but not gangrene. In the two cases to which I have just referred, the one recorded by Lamotte and the other by Volvius, the circulation in the affected parts was apparently totally suspended for eight or ten days, and yet there was no appearance of gangrene or mortification. This destructive change seems to require for its production another factor—namely, a degraded vitality in the cell structures affected—a retrograde change in the tissues. But how is this change brought about? To my mind, certainly what we see here lends weight to the opinion of those who believe in the existence of trophic nerves—nerves which directly control the nutrition of the part to which they are distributed; when their functions are suspended, thereupon destructive changes are liable to occur. Possibly, however, the experiments of Boas[2] throw some light on these and similar cases. On ligaturing the finger and placing it in ice-cold water, he observed certain changes in the blood-corpuscles in a patient who was subject to hæmoglobinuria (a disease closely allied to symmetrical gangrene). The hæmoglobin was, in fact, found dissolved in the serum, while the changes in the blood discs corresponded with those which have been described by Ponfick; consequently the corpuscles were less resistant to cold than in the normal state. This change in the blood was not observed in a healthy person.

An attentive consideration of the phenomena which accompany an attack of symmetrical gangrene, supply to us much valuable information regarding the circulation of the blood, as it is distributed to the extremities. In numerous instances we observe, perhaps, a more or less generally diffused discolouration of these parts, while within this discoloured area may be seen little black islets consisting of gangrenous patches. These islets do not gradually merge into the surrounding parts, but their outline is clear and distinct. Thus in one of Raynaud's cases he remarks: "In the middle of the most diseased parts

[16] The division of the oblique and sagittal lines into twelfths is readily calculated by employing a measure graduated in lines.

[1] Medical Times and Gazette, vol. i., p. 408.
[2] Deutsch. Archiv f. Klin. Medicin, 1883.

there are small violet patches as big as pins' heads, cut off by their colour from the remainder, not disappearing with pressure or friction; these are small eschars completely formed." Some curious symptoms, also, from which he himself was a sufferer, are recorded by Petri.[3] Symmetrical patches appeared in various parts of his upper extremities and on his trunk; purple blotches also came out under the clavicles, and in the midst of these blotches black eschars were clearly discerned. Similar vagaries in the circulation were observed in a case recorded by Mr. Thomas Tannahill.[4] The patient was a delicate girl seven years of age; in her case erythematous patches were observed with white islets dotted over their surface. Here, in place of finding gangrenous islets distributed over parts locally asphyxiated, we notice small enclosures of local syncope surrounded by a surface more or less engorged. Cases like these supply to us much useful instruction; they are, in fact, outward and visible signs of the mysterious working of the sympathetic system within us; they tell us that in numerous cases in which we are accustomed to look upon symptoms as merely functional, those symptoms may in reality depend either on anæmia or hyperæmia, or on some other gross material change. To understand these anomalies in the circulation of the extremities, we must remember what physiology has taught us regarding the manner in which each capillary area and territory has its own minute nervous system. This minute system regulates in each locality the course of the blood in relation to the chemical requirements of the several organs. Thus, in the words of Raynaud, "each part is united to the whole by the common conditions of the general circulation, and at the same time, by means of the nervous system, each part can have a circulation of its own, and become physiologically individualised."

Some discussion has arisen regarding the portions of the vascular system which are more especially involved in symmetrical gangrene. Some authorities consider that the arterioles are alone affected, and that it is in them that the spasmodic closure occurs. Others maintain that the capillaries likewise are spasmodically contracted. While M. Weiss asserts that the process may be solely confined to the veins, a loss of tone in these vessels leading primarily to local asphyxia. An attentive study of the phenomena which accompany this disease in its different stages will, I think, lead us to believe that in local syncope, when the ischæmia is extreme, arteries, capillaries, and venules are alike affected by the spasmodic constriction, and are all firmly contracted. After a time, however, when local syncope is succeeded by asphyxia, the veins, to which the muscular elements are more sparingly distributed than to the arteries, are the first to dilate, the latter remaining impervious. We then observe an occurrence of those changes with which Cohnheim has made us familiar, when terminal arteries are occluded by an embolus, venous blood regurgitating from the veins into the capillaries and arterioles. Possibly, however, the engorgement which ensues is rather to be attributed to a slow infiltration from those capillaries which communicate with the arteries of adjacent territories than to a regurgitation from the veins. In this way we may explain the curious manner in which the circulation in an asphyxiated part is restored after the vessels have been forcibly emptied. Thus Raynaud remarks, in reference to this point, "if pressure be made on cyanosed skin, a white spot is produced; it disappears slowly; the return to the primitive tint extends either from the periphery to the centre, or from a central point which appears in the middle of the white patch, and by little and little rejoins the border." In another case recorded by Mr. Joseph Collier (*Manchester Medical Chronicle*, 1889), we find another instance of the blood diffusing itself over the white patch from so many scattered capillary centres. Thus Mr. Collier remarks: "On pressing with the thumb upon the affected portion of skin, a white area could be produced, which surely but very gradually again became blue. It was noticeable, however, that the bluish tint did not creep from the periphery over the white area, but that in the ex-sanguined area several blue spots appeared, which slowly extended and coalesced."

A study of the numerous cases which I have collated unmistakably teaches us how varied, both in their extent and distribution, are the lesions to which the term "symmetrical gangrene" has been applied. As these lesions differ, so it is reasonable to assume that those changes in the nerves on which they are believed to depend differ also in their character and in their gravity. In simple local syncope, more especially where the symptoms are induced by changes of temperature, the integuments of the extremities of the fingers and toes are at times alone affected. Here frequently no pain is experienced, merely a sense of numbness. In such cases the epidermis is the part solely affected, the deeper tissues escaping. There may be a partial anæsthesia in consequence of the peripheral extremities of the sensory nerves being more or less involved, but there is no general disturbance of any extended portion of the nervous system. In such a case, the exciting cause acts directly on those minute ganglia which are distributed over the vessels, and any constricting influence exerted upon the coats of the arteries and veins seems wholly dependent on their influence. No higher centres, situated either in the cord or elsewhere, are called into play. In other cases, however—as, for example, when local syncope is succeeded by asphyxia,—we find the disturbance of the nervous system more widely diffused. In numerous instances tingling, and burning, and darting pains are experienced, radiating centripetally in the direction of the cord. These pains may be prolonged for many weeks. Here a sensation—as, for example, of cold—is transmitted by the sensory nerves to an excito-motor centre in the cord, and from that centre a stimulating influence is reflected along the vascular nerves. Hence sensory and vaso-motor nerves are alike implicated. In other cases, again, the motor nerves are likewise affected, and we observe peripheral neuritis. Several such cases have been recorded. Dr. Barlow, in his valuable appendix to Raynaud's papers (translated by him for the New Sydenham Society), refers to several of these cases. The first was recorded by Mounstein, and others referred to Pitres and Vaillard. In Mounstein's case changes were found in the nerves of both lower extremities, and in the two cases of Pitres and Vaillard the peripheral neuritis was well marked. Several other examples of such changes in the peripheral nerves have been observed. Thus, in my own case, it was noticed that when the arms were extended the hands dropped. So also, in a case reported by Englisch,[5] it is said that the extremities of the fingers were affected, the sensibility of the finger-tips to the faradaic current being much lessened, as also the irritability of the thumb muscles, the interossei, and the extensors of the arm. Dr. J. O. Affleck also has published a case[6] in which peripheral neuritis was observed. The patient was a girl aged sixteen; her symptoms were grave, and it was found necessary to remove the left foot. Dr. Wiglesworth likewise has described[7] a case of a female aged twenty-six, admitted into the Rainhill Asylum, who had lost several fingers from Raynaud's disease. On the death of this patient extensive changes were discovered in the nerves—namely, an overgrowth of the fibrous elements of the nerves, with atrophy and degeneration of the nervous elements. The disease processes were found to be more advanced at the distal than at the central ends of the nerves. Leloir and Dejérine have also reported a somewhat similar case. These are, so far as I can discover, the only examples of Raynaud's disease in which any distinct reference is made to peripheral neuritis. They were for the most part observed in persons whose symptoms were of a more or less prolonged or obstinate character. In several instances the changes were confined to the peripheral branches of the extremities, the nerve trunks remaining intact. It does not appear that the course of the disease was materially influenced by this complication, which I am disposed to believe cannot be looked upon as an essential factor in symmetrical gangrene. Some few cases have been recorded in which portions of the sympathetic system have been found more or less involved by disease. Thus Dr. Fagge, in his "Principles and Practice of Medicine,"[8] refers to such a case. He remarks: "One very curious effect of a mediastinal growth which I had an opportunity of observing many years ago must, I think, be attributed to pressure upon the vaso-motor nerves. The patient was a woman, aged twenty-six, who was admitted in the summer of 1866 for a defective state of the circulation in her fingers, which were cold and shrunken, and also very painful and tender. The case ended fatally, and at the necropsy it was found that the growth infiltrated the fibrous tissue in front of the spine and involved both the first dorsal nerve and the sympathetic trunk." In Mr. Collier's case also, to which I have already referred, a post-mortem examination showed peritonitis especially well marked in the region of the solar plexus. Cases such as these must

[3] Berliner Klin. Wochenschrift.
[4] Glasgow Medical Journal, Dec. 1888.
[5] Wien. Med. Presse.
[6] Brit. Med. Jour., Dec. 1888.
[7] Trans. Path. Soc., 1887.
[8] Vol. ii., p. 80.

necessarily be rare, inasmuch as the lessons they teach are only discoverable after death, and the instances are by no means numerous in which symmetrical gangrene terminates fatally. Still, a considerable number of cases have been published in which some of those symptoms which are frequently associated with abnormal changes in the semilunar and solar plexuses have been observed, and I feel persuaded that, if our knowledge of this curious affection is to be advanced, it is in this direction, by the examination of these portions of the sympathetic with its complicated abdominal plexuses, that the investigations of competent observers are likely to be followed by the most useful results. In addition to these cases, well-marked examples of Raynaud's disease have been associated with lesions in the spinal cord. Thus Hochenegg alludes to symptoms of gangrene of the toes in both feet, in a man aged thirty-four, who suffered from tabes dorsalis. Another patient, aged fifty-one, experienced attacks of gangrene in the fingers of his right hand, which supervened shortly before his death. Here inspection showed syringomyelia, extending from the fourth cervical to the fifth dorsal nerve. In another case recorded by Dr. T. A. McBride,[9] symptoms of this affection were noticed in a man of thirty-two, afflicted with anterior spinal paralysis. Cases have also been published where symmetrical gangrene seemed to depend on lesions of the brain. Thus the *Journal of Mental Science* for April, 1889, contains an account of a case of acute mania, with symmetrical gangrene of the toes, by Dr. J. Macpherson. The subject of the affection was a girl aged eighteen; there was a strong hereditary tendency towards insanity; black spots were observed on the extremities of the feet, the spots on the several toes exactly corresponding with those on their fellow toes of the opposite foot. The patient eventually recovered. Dr. Southey has reported another instance of this form of gangrene associated with acute mania; and lately Mr. W. C. Bland has published still another (THE LANCET, April, 1889), where a patient, aged twenty-three, was admitted into the Milton Lunatic Asylum on Dec. 18th, 1888, suffering from a severe attack of acute mania. In a paper by Mr. J. C. Shaw, medical superintendent of the King's County Insane Asylum,[10] several cases are reported in which well-marked symptoms of Raynaud's disease were observed in persons suffering from various kinds of chronic mental affections. One was a woman aged fifty, admitted for melancholia and delirium; another, a female of forty, described as of a very low order of intelligence, with delusions regarding poisoning; and a third, a woman of fifty-one, in whom the mental faculties appear to have been weak.

In the foregoing remarks I have endeavoured to show how varied are the lesions of the nervous system which are associated with symmetrical gangrene. The brain, spinal cord, sympathetic system, peripheral nerves, and peripheral ganglia may be severally or together involved. If, then, the lesions connected with this disease are so multifarious, it is but reasonable to expect that the manifestations thereof should be proportionately varied and uncertain, and that in one case we should find perhaps one terminal phalanx of a finger surrounded by a bluish patch, while in another the whole limb would be rapidly destroyed and cast off as a lifeless mass.

(To be concluded.)

PSEUDO HAY FEVER; SYMPTOMS AND TREATMENT.[1]

BY ADOLF BRONNER, M.D.,
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So much has lately been written and talked about hay fever that I almost feel as though I must apologise for introducing it. It seems to me, however, that in this case, as in so many others, the very fact that so much is written and discussed on the subject proves that most men do not agree as to the exact nature and definition of the disease. Most men simply call hay fever any chronic or recurrent affection of the mucous membrane of the nose, accompanied by attacks of copious watery discharge or violent sneezing. We thus find that hay fever seems to be a very common disease. If we, however, carefully examine these cases, we find that we can, roughly speaking, divide them into two classes: firstly, those cases in which the mucous membrane of the nose usually seems to be quite normal, and only swells at certain periods, when the swelling is accompanied by attacks of violent sneezing and watery discharge — hay fever and vaso-motor rhinitis; and, secondly, those cases in which the mucous membrane is always swollen — chronic hypertrophic rhinitis. The diseases of the first class are of a neurotic nature, and occur mostly in weakly and nervous subjects. The attacks of violent sneezing and watery discharge are brought on, firstly, only by the pollen of certain grasses, and by no other irritant—hay fever; or, secondly, by any sudden change of temperature, or wet feet—vaso-motor or neurotic rhinitis. In the second class—chronic hypertrophic rhinitis—the disease is purely local, and is caused by a chronic enlargement of the mucous membrane of the nose. The attacks can be brought on by any local irritation, and therefore also by the pollen of grasses, but not, as in hay fever, exclusively by these; and also by any sudden change of temperature or wet feet. Hay fever, as just described, is a very typical and well-defined disease, and is, in the north of England at least, of very rare occurrence.

There is another affection closely allied to hay fever, which I should like to call nervous or vaso-motor rhinitis. Like hay fever, it mostly affects neurotic subjects, especially girls of the upper classes. It usually occurs in autumn and spring. The attacks are similar to those of hay fever, and are accompanied by profuse watery discharge and sneezing. During the attacks the mucous membrane is much swollen, but in the intervals it appears to be quite normal. Unlike hay fever, the attacks are not caused by any local irritation, and have nothing whatever to do with the pollen of grasses, but are brought on by sudden changes of temperature or wet feet. They last a definite time—generally twelve or twenty-four hours,—and mostly begin at night, and last till the following morning or evening. The sneezing and watery discharge are generally so violent that the patient cannot sleep, and feels very weak in the morning. Cocaine or menthol often affords relief for some hours. In some cases antifebrin or bromide of potassium cuts short the attacks, thus proving the neurotic origin of the disease. In this class of cases—hay fever and neurotic rhinitis—local treatment is of very little use, unless combined with general treatment, and even then in most cases the only effective cure is change of climate.

The disease which is generally called hay fever, which is very common, but which has nothing whatever to do with hay fever as defined above, is a kind of chronic hypertrophic rhinitis. It is mainly a local affection, and is caused by a chronic enlargement of the mucous membrane of the nose. The mucous membrane of the lower turbinated bones is usually affected the most; often also that of the middle turbinated bones, septum, and floor of the nares. The swelling is of a dull-red colour in the anterior half, and of a yellow-grey colour in the posterior half, where it is often mistaken for a polypus. On pressure with a probe, the parts appear soft, and can readily be compressed. After the use of cocaine or menthol, the mucous membrane partly collapses and attains nearly its normal size. This is of great importance, as we can thus readily recognise what is swollen mucous membrane and what is normal tissue. On microscopic examination, the swelling is found to be caused by hypertrophy of the third or cavernous layer of the mucous membrane, and is therefore in reality a kind of angioma cavernosum.

Hack, Fraenkel, and others have in late years shown how this swelling of the mucous membrane of the nose can give rise to all kinds of reflex symptoms, such as asthma, megrim, epileptic attacks, &c. I cannot now, however, enter into these very interesting researches, but will only touch upon the typical symptoms of chronic hypertrophic rhinitis, some of which closely resemble the symptoms of hay fever, and which have given rise to so much confusion. In all cases there is a history of obstruction of the nares, generally only one side at a time, and worse at night. In many cases the whole of the nose is swollen, and of a peculiar shiny red colour. Often there is swelling and eczema of the upper lip, caused and kept up by the constant discharge from the nares. Certain irritants—dust, smoke, &c.—or sudden change of temperature, or wet feet, bring on attacks of violent sneezing, which last from several minutes to as many hours. These are often accompanied by a copious watery discharge, or we may have the copious discharge

[9] New York Medical Record, April, 1878.
[10] New York Medical Journal, 1886.
[1] Paper read before the March meeting of the Leeds and West Riding Medico-Chirurgical Society, 1889.

without any sneezing. The following are a few of the many cases of chronic hypertrophic rhinitis which I have in the last two or three years had the opportunity of treating. The cases are, of course, very similar, but these seem to me to show some of the typical symptoms.

CASE 1.—Mrs. F——, aged forty, consulted me in August, 1886, for what she called hay fever. She had never for the last twenty or thirty years been able to breathe through both nostrils; generally one side was closed, sometimes both. For the last seven or eight years she had been subject to sudden attacks of this hay fever. If she had been exposed to dust or wind, or especially after going out of a warm room into the open air, after lectures, theatre, or concerts, the nose began to tickle and swell, and a copious watery discharge set in, which generally lasted for ten or twelve hours. The discharge was usually so bad that she could not sleep, and used ten or twenty pocket-handkerchiefs. For the last three or four years she has had to give up going out in the evening. On examination both lower turbinated bones were found to be much swollen; in short, there were all the typical symptoms of chronic hypertrophic rhinitis. As she had already tried all kinds of remedies, cocaine spray, snuffs, nasal douches, bougies, &c., I advised her to have the mucous membrane treated with the galvano-cautery. I burnt both sides twice. After five or six weeks the attacks became gradually weaker and weaker, she was able to go out again in the evening, could attend lectures, and go to the concert and theatre, without the least subsequent discomfort.

CASE 2.—Mr. M——, aged fifty, had been troubled with frequent attacks of violent sneezing for many years. Any sudden change of temperature brought on the attacks; they nearly always came on if he entered a warm room or left a warm room and went out into the cold air. Many times he had been obliged to leave the theatre or concert because of the violent attacks of sneezing. The attacks lasted from about ten minutes to as many hours. After a bad attack he usually suffered from violent headache for the rest of the day. Both nostrils showed all the symptoms of chronic rhinitis. The use of the nasal douche, snuffs, &c., made matters worse. I used the galvano-cautery on both sides twice in November, 1887. The attacks of sneezing soon ceased, and the patient has never been troubled with them since.

CASE 3.—Mrs. M——, aged forty-five, had suffered from attacks of sneezing and watery discharge from the nostrils for about twelve years. The attacks were worse in June and November. When grass was in bloom or hay was made, she had to go to the seaside for some weeks. Dust or smoke also brought on the attacks. There were the typical symptoms of chronic hypertrophic rhinitis. I used the galvano-cautery on both sides in July and November, 1887. Last year, for the first time for many years, she had been able to stop at home when hay was made, had had no more attacks of sneezing, and had felt, as she said, a different person altogether.

CASE 4.—Miss W——, aged seventeen, consulted me in June, 1887, for copious discharge from the nostrils and considerable enlargement of the whole of the nose, which was of a peculiar, shiny, red colour. She had noticed the symptoms since she had scarlet fever, six years ago. The mother was very unhappy about the size and colour of the nose, which certainly much disfigured the otherwise very handsome girl. The mucous membrane of the nose was much swollen. I cauterised both sides three times. In from two to three months the nose was reduced to its normal size and colour.

CASE 5.—Mr. L——, aged thirty-five, consulted me in April, 1887. For eight years he had been troubled with watery discharge from the nostrils and chronic eczema of the upper lip. The lip was often much swollen and very painful. He also noticed that his nose, which nature made very large and arched, had become very thick and red. He had tried all kinds of remedies. As there was well-marked hypertrophic rhinitis, I told him that ointment would be of no use, and that the only way to cure the eczema was to treat the mucous membrane of the nose, and thus stop its discharge. At first he was very much afraid of the galvano-cautery, but when I told him that I hoped not only to stop the discharge, and thus cure the eczema, but also to reduce the size of the nose, he was willing to submit to anything. I cauterised the right side three times and the left twice. The eczema soon disappeared, the lip has never been swollen since, and the size of the nose has considerably decreased.

As these symptoms are brought on by a chronic enlargement of the mucous membrane of the nose, it naturally follows that the treatment must chiefly be a local one. If we consider that the swelling is caused by hypertrophy of the third or cavernous layer of the mucous membrane, and often attains very formidable dimensions, we can readily conceive how half-hearted measures, such as the nasal douche and various kinds of snuffs, can in most cases be of no permanent benefit. I now invariably in well-marked cases use the galvano-cautery, and find it vastly superior to any other method. Before operating I use the cocaine spray, and then introduce a plug of cotton wool saturated with a 10 per cent. cocaine solution into the nostril, and leave it there for about ten minutes. The operation is thus rendered practically painless. In fact, the only thing even very nervous patients complain of is the disagreeable smell of the burnt tissue. I use a thick platinum-wire point, and slightly bend the point towards the mucous membrane. If possible I use a new point for every patient, to avoid the possibility of any infection. I have had some points made in which the isolating silk only goes to the middle of the shaft; so that the upper half, which is introduced into the nostril, can, if necessary, be properly disinfected. The point is passed, under guidance of the frontal mirror, through the anterior nares to the posterior end, and then drawn with gentle pressure along the whole of the mucous membrane of the lower turbinated bone—once. You thus cut, or rather burn, a deep furrow along the whole of the diseased membrane. A cicatrix forms, which prevents any subsequent swelling of the mucous membrane, especially if, as happens in most cases, the cicatrix becomes adherent to the osseous tissue of the turbinated bone. I generally find it necessary to operate twice on either side. In cases in which the swelling is very great or the septum bent or thick, I introduce a plug of cotton wool and glycerine to prevent any subsequent synechiæ between the turbinated bone and the septum, which are otherwise very apt to occur.

Chronic hypertrophic rhinitis is a very common disease. In bad cases it renders the life of the patient perfectly miserable, often compelling him to give up his occupation and leave his home in search of a better climate. In many cases it goes on into polypoid degeneration of the mucous membrane, accompanied by loss of smell and taste, sets up inflammation of the maxillary or frontal sinuses, and is a very common cause of so-called post-nasal catarrh and relaxed throat. It also very frequently brings on or keeps up inflammation of the middle ear. In all cases of chronic or recurrent diseases of the middle ear, we ought therefore to carefully examine the nose, and remove any obstruction there may be to the free passage of air over the Eustachian orifices or any source of inflammatory changes.

Bradford.

RESULTS OF

MAJOR AMPUTATIONS TREATED ANTISEPTICALLY IN THE ROYAL INFIRMARY, NEWCASTLE-ON-TYNE, DURING 1888, AND FOR A PERIOD OF TEN CONSECUTIVE YEARS AND NINE MONTHS.

BY FREDERICK PAGE,

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TABLE I. gives the results of major amputations treated antiseptically in the Royal Infirmary, Newcastle-on-Tyne, during 1888.

TABLE I.

—	For Injury.			For Disease.			Total.
	No.	Rec.	Died.	No.	Rec.	Died.	
Hip-joint	1	0	1	0	0	0	1
Thigh	1	1	0	10	10	0	11
Knee-joint	0	0	0	0	0	0	0
Leg	4	1	3	2	2	0	6
Ankle-joint	1	1	0	13	13	0	14
Shoulder-joint	2	1	1	1	1	0	3
Arm	2	1	1	0	0	0	2
Forearm	2	2	0	3	3	0	5
Wrist	0	0	0	0	0	0	0
—	13	7	6	29	29	0	42

The number of amputations is unusually small, and the mortality unusually high. Of the forty-two patients treated, six died (14·2 per cent.). Twenty-nine of the amputations were for disease, and among them there were no deaths. Last year we had forty-three amputations for disease without a death, so that we have now had seventy-two consecutive amputations for disease without a single death. Of the thirteen amputations for injury, six patients died, which is a mortality of 46·1 per cent., contrasting very unfavourably with the mortality following amputation for injury during the previous five years. From Jan. 1st, 1883, to Dec. 31st, 1887, exactly 100 major amputations were performed for injury, and four patients died. The mere statement, however, that so many cases have been operated upon, and that so many proved fatal, is not of much value unless details are given of each death, and it is with the object of making these statistical records valuable that I have now for a term of six years carefully tabulated the circumstances accompanying each death, the actual cause of death, and the age of the patients who have died. We want in an inquiry of this kind to know particularly how many patients have died from blood-poisoning. That is the crucial question. Blood-poisoning is to a considerable extent an avoidable cause of death. The age of the patient is a matter of great importance, determining as it does, more perhaps than any other single circumstance, the result of the case. We have been wonderfully free of late years from deaths from blood-poisoning. During the five years preceding the past year only two cases occurred; but the following history of the six deaths in 1888 is less satisfactory than any preceding record.

Precise Cause of each Death in the year 1888.

1. Man aged forty-nine. Amputation of the leg five months after compound fracture; stump nearly healed. Death from blood-poisoning. The blood-poisoning is supposed to have been due to the patient spending a considerable time smoking in a watercloset.

2. Man aged forty-four. Upper arm crushed off close to the shoulder by the wheel of a locomotive. It was difficult to cover the wound with skin after disarticulation. Sloughing took place. Death from blood-poisoning.

3. Man aged forty-nine. Primary amputation of leg below knee for compound fracture. Part of the foot of the other limb was removed at the same time. Death in fourteen days from blood-poisoning.

4. Woman aged sixty-two. Primary amputation of right upper arm for compound fracture. In addition there was an extensive laceration of the soft parts of the left leg and thigh. The amputation progressed favourably, but the lacerated wounds became septic, and death ensued fourteen days after the accident.

5. Boy aged fifteen, admitted from a distance with gangrene of foot following compound dislocation of ankle received a week before. Death from tetanus six days after amputation below the knee.

6. Boy aged fourteen. Primary amputation at hip Death in a few hours from shock.

It will be seen that of the six deaths four are returned as due to blood-poisoning. Two of these four patients were forty-nine, one sixty-two, and one forty-two years of age. The other two were boys aged respectively fourteen and fifteen. I do not think it wise to look upon these deaths from blood-poisoning as accidental, and I feel that they should stimulate us to most diligently search out and exclude every possible source of infection. I am satisfied that years ago the high amputation mortality in the Newcastle Infirmary was due to a large extent to the circumstance that the surgical cases were dressed by the persons who made the post-mortem examinations. I feel very strongly that the house surgeons and the dressers ought not to be permitted to enter the post-mortem room or to frequent the dissecting room during their tenure of office. There is risk of infection being brought from those places, and it is an avoidable risk to which patients need not and should not be exposed.

Table II. gives the results of amputations treated antiseptically from Jan. 1st, 1883, to Dec. 31st, 1888, a period of six years, during the time that the precise cause of each death has been recorded. In this table we have 324 major amputations, with 20 deaths (6·1 per cent.); 113 amputations for injury, with 10 deaths (8·8 per cent.); and 211 for disease, also with 10 deaths (4·7 per cent.).

TABLE II.

—	For Injury.			For Disease.			Total.
	No.	Rec.	Died.	No.	Rec.	Died.	
Double amputation ..	2	1	1	0	0	0	2
Hip-joint	1	0	1	10	7	3	11
Thigh	16	14	2	79	76	3	95
Knee-joint	4	4	0	1	1	0	5
Leg	27	24	3	35	33	2	62
Ankle-joint	15	15	0	53	52	1	68
Shoulder-joint	5	4	1	7	7	0	12
Arm	18	17	1	11	10	1	29
Forearm	18	17	1	15	15	0	33
Wrist	7	7	0	0	0	0	7
—	113	103	10	211	191	10	324

If we add Table II. to one already published, giving the results of amputation from April 1st, 1878, to Dec. 31st, 1882, we get, as in Table III., the results for the period of ten years and nine months (April 1st, 1878, to Dec. 31st, 1888)—viz., 484 major amputations, with 37 deaths (7·6 per cent.). Of these 178 were for injury, and 22 patients died (12·3 per cent.); 306 were for disease, and 15 patients died (4·9 per cent.).

TABLE III.

—	For Injury.			For Disease.			Total.
	No.	Rec.	Died.	No.	Rec.	Died.	
Double amputation ..	2	1	1	0	0	0	2
Hip-joint	1	0	1	12	7	5	18
Thigh	32	25	7	116	110	6	148
Knee-joint	7	6	1	5	5	0	12
Leg	47	40	7	59	57	2	106
Ankle-joint	19	19	0	69	68	1	88
Shoulder-joint	8	7	1	9	9	0	17
Arm	29	28	3	17	16	1	46
Forearm	26	25	1	19	19	0	45
Wrist	7	7	0	0	0	0	7
—	178	156	22	306	291	15	484

Newcastle-on-Tyne.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF MANIA TRANSITORIA.

BY R. R. SLEMAN, B.A.CANTAB., L.S.A.LOND.

I HAVE read with great interest the notes of Dr. E. F. Willoughby's case of threatening mania which appeared in a recent issue of THE LANCET, and which he treated with pilocarpine, but cannot agree with his inference respecting the treatment adopted. It appears to me that the result was *post hoc sed non propter*. His case is very similar to one of which I give the notes below, and which, I think, was one of mania transitoria, of which Dr. Bristowe writes in his "Theory and Practice of Medicine."

I was called a short time since, at about 9.30 P.M., to see a patient residing in the City. He was a short, thick-set man, of sixty years of age, the father of a large and healthy family. He had had no previous illness of any consequence. It appeared that on the evening in question he had been for a walk of about six miles with some friends, had arrived home, and had got inside the outer door, when he became faint, fell down on the mat, and was found there partially unconscious. As he seemed to be too ill to walk upstairs, his sons carried him up. When I arrived at the house the man had rallied somewhat, and with a little assistance stood up and demanded the reason of my being there, and so on, talking excitedly and in evident fear. He could give no account of what had happened previously. I could find no trace of injury or of alcoholism, and on these points the friends confirmed

my opinion. Presently, with a little persuasion and help, we got him into bed, and he was, as we thought, comfortably settled. However, he soon commenced to be very violent with his fists, and to shout loudly, and at times piteously, as if in dread of some persons or things near him. This continued for about twenty minutes, when he fell back in the bed exhausted and was quiet; but not for long, however, as he suddenly, and without the least warning, leapt out of bed, and, before anything could be done to restrain him, had got to the other side of the room and made for a chest of drawers there, promptly opened one of them, and took out a six-chambered revolver and cartridges. But by this time I had firm hold of his wrists, and succeeded with some force in taking away the weapon. His condition for another half-hour was very violent, after which time he became decidedly better, and quieted down considerably. Dr. Stephen Mackenzie, who saw the case with me at this juncture, suggested bromide of potassium in twenty-grain doses every four hours, and, as we were now able to get the patient to swallow, his suggestion was adopted. At 3 A.M. the patient was quiet and sleeping, so that I was able to leave him. On returning at 10 A.M. I found that he had had a fair amount of sleep, and, with the exception of feeling weak and prostrate, pronounced himself to be all right. He could give no account of anything that had happened to him after getting inside his door. The urine was normal, containing no albumen.

I have made careful inquiries, and have not been able to find anything to account for this strange attack. We are told that the most common causes of this acute transitory mania are hereditary insanity, alcoholism, and epilepsy. None of these was present in this case. The patient is now well, and has had no return of his condition.

St. Benet's-place, E.C.

FOREIGN BODY IN THE EYE FOR TWO YEARS.

By S. A. L. SWAN, M.D.

THE history of the following case may prove of interest, showing how long the eye, sensitive organ as it is, will remain tolerant of foreign bodies, and how easily their presence may be overlooked.

At the beginning of May J. M—— came to me complaining of pain and weakness in his right eye, which he said he had first felt two years ago, but which did not prevent him from following his occupation as a bleacher. He had used a "wash," and had consulted a medical man once, but had not further troubled about it. He complained at the time I saw him of the constant discharge (which was purulent) and inability to bear strong light. On examination there was a considerable amount of conjunctivitis extending from the inner canthus upwards and outwards beneath the upper lid. As he had no recollection of having received any injury, I treated the case for some days as one of chronic conjunctivitis, but without any benefit. On June 4th, while everting the upper lid, I was surprised to find a black object protruding beneath it. This, on removal, I found to be a thorn, which measured three-eighths of an inch in length. As the man occupied himself in his leisure in procuring and dressing walking-sticks for sale, its presence was easily accounted for. The pain and discomfort almost instantly ceased on its removal, and the eye was quite well on June 8th.

It seems strange that a hard substance of such size should remain so long in this situation, causing comparatively little inconvenience, and without ulcerating either into the posterior chamber or through the eyelid.

Gilford, co. Down.

A CASE OF INTESTINAL OBSTRUCTION; RECOVERY.

By CHARLES F. WILLIAMSON, L.R.C.P. LOND., &c.

THE following case illustrates the use of the long rectal tube; and, as it exhibits certain points of similarity, although differing somewhat in details, to Dr. Robert Kirk's case in THE LANCET of June 8th, it may be worthy of record.

On Dec. 21st last, at 2 A.M., William B——, aged twenty-eight, was suddenly seized with severe pain in the abdomen, referred chiefly to the left iliac region, and accompanied with bilious vomiting and hiccough in the course of four hours. He had been ailing for the previous six days, with occasional vomiting and troublesome constipation, a less amount being passed at each action of the bowels; he nevertheless continued at his work. On seeing him, he was lying on his back, with legs drawn up, anxious expression, creamy fur on tongue, abdomen flatulent, muscles over left iliac region tense, great tenderness, and an irregular hard, but not doughy, swelling felt on palpation. Temperature 101°; pulse 90, quick and full. Bowels not open for twenty-four hours, but painful tenesmus. Urine very scanty and high-coloured. No hernia was present. Difficulty was experienced in introducing the finger per rectum, no fæces being felt when this had been accomplished. He was ordered ten grains of calomel and ten of chloral hydrate every two hours; also an enema of soapy water every four hours.—Dec. 22nd: The pain was much less, but the vomiting continued, and he was only able to keep down a little milk and brandy. Bowels not open, and nothing felt per rectum. Enemata to be continued.—23rd: A very hard mass was felt per rectum. This I broke up with the handle of a spoon, and then introduced a long rectal tube and injected two quarts of soapy water, which was followed in half an hour by one copious motion; but the abdomen remained distended.—24th: Can keep down nourishment better, but a hard lump still felt in the same region. A hard mass was felt per rectum; so I again broke it up and used the long tube again. This was followed by three actions of the bowels, and the abdomen became flat. After this he made an uninterrupted recovery, and was soon able to resume his work. I may add that the fæces were hard, and apparently had lime concretion on the surface, and, on being broken up, were brittle and came away in flakes.

Horley, Surrey.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

LONDON HOSPITAL.

CASES OF EXTRA-UTERINE GESTATION; REMARKS.

(Under the care of Dr. HERMAN.)

EXTRA-UTERINE gestation is of rare occurrence, and its existence is seldom suspected until the sac ruptures. These cases are examples of the rupture of the sac into the abdominal cavity and into the layers of the broad ligament. Of these, rupture in the former direction is much the more common, and is an extremely fatal occurrence; Kiwisch[1] places the mortality at 82·5 per cent., Hennig at 88 per cent. The methods of treatment which have been employed for the cure of this condition are—tapping the sac and drawing off the liquor amnii, tapping and injecting morphia or other narcotics, electrolysis, abdominal section, and incision through the vaginal wall. Of these, the first three are employed to destroy the life of the fœtus. The others aim at the evacuation of the contents of the sac and its obliteration. In cases such as those under the care of Dr. Herman, with rupture and hæmorrhage, removal by abdominal section is the only successful treatment. A curious case, in which extra-uterine gestation existed and formed a bar to the delivery of a child, is recorded by Dr. Stewart of Philadelphia.[2] The cause of the obstruction was recognised, and the cyst evacuated through the posterior vaginal wall. The child was then successfully delivered, and the mother made a good recovery. For the notes of the cases we are indebted to Mr. Woodall, clinical clerk.

Tubal gestation; rupture at end of second month; several slight hæmorrhages into peritoneal cavity in first half of third month; laparotomy; cure.—E. R——, aged thirty-nine, admitted on March 9th, 1889. The patient was not

[1] Hart and Barber: Manual of Gynæcology.
[2] American System of Gynæcology, vol i., p. 717.

very intelligent, and precise information was obtained with difficulty. She said she had never been ill before. Until her last pregnancy she had always menstruated regularly without pain. She was married at twenty-six, and had had three children; labours natural. She had of late been short of food, and therefore felt weak. Her last child was born two years ago. She suckled it five months. After weaning it, she lost blood every two weeks till October, 1888. Then she went six weeks without seeing anything, and after this menstruated as usual, the last period ceasing on Jan. 1st, 1889. Then she saw nothing till a week before admission. On March 1st she had an attack of severe pain, accompanied by vomiting and faintness. She kept in bed and her symptoms improved. On the 5th she got up and went out for a walk; on the 6th the pain and vomiting returned; and on the 9th she came to the hospital and was admitted.

On admission, the patient was thin, pale, and weakly-looking. Temperature 102°; pulse 108. Beyond these there were no physical signs of disease elsewhere than in the pelvis. The abdomen was tender; the muscles were rigid; but no tumour was felt. Per vaginam, the cervix uteri was found displaced forwards by a soft and rather tender swelling behind it.

During the first three days following admission the patient's condition improved, and her temperature gradually fell to normal. The case was at this time considered to be one of hæmatocele, possibly due to extra-uterine gestation; and, as it appeared to be taking a favourable course, no active treatment was advised. During the night of March 12th the patient was restless and faint, and complained of pain in the lower abdomen. In the morning she was paler, the swelling behind the uterus was distinctly larger, and the uterus more pushed forwards. It seemed clear that there had been a further hæmorrhage, and it was inferred that the cause of the hæmorrhage was still persistent. Operation was therefore advised, and performed by Dr. Herman the same evening. On opening the peritoneum fluid blood ran out. Much solid clot, in lumps and layers of different dates, evidenced by partial decolourisation in different degrees, was scooped up with the fingers, chiefly from the left side of the pelvis. In this partly decolorised clot was unmistakable chorionic tissue. Then the left Fallopian tube, which was expanded and ruptured, was pulled up, tied, and removed. No fœtus was found. (The expanded tube, or rather the part of it removed, measured about two inches wide when laid open.) The peritoneum was then washed out with hot water, and bleeding arrested partly by this means, partly by pressure with sponges. A Keith's drainage-tube was inserted.

The tube was removed about twenty hours after the operation. No bad symptoms occurred during convalescence. The temperature, during the fortnight following operation, did not exceed 99°.

April 12th.—Patient discharged to go into the country. She was feeling rather weak, but was otherwise quite well, and the wound had healed.

Sub-peritoneo-pelvic gestation (probably produced by rupture of tubal gestation early in third month); abdominal section at beginning of fifth month; cure.—L. H——, aged thirty, was admitted on March 24th, 1889. The patient stated that she had had no previous illness. She began to menstruate at thirteen; the flow, which lasted a week, was scanty. She was married at twenty. She had had one child ten months after marriage, the labour being easy and convalescence natural; the infant was suckled for eight months. After this the patient was regular until two or three years ago, when she went eight months without seeing anything. After that time she was regular again till November, 1888. For six months previously to admission she had had a thick yellow discharge, but since November she had not menstruated. Two months before coming to the hospital she was seized with sudden pain in the pelvis, of a sharp, cutting character; she felt very faint, and turned very white. She kept her bed for ten days, and then got up. After a week she had another attack, like the first, but worse. She remained in bed two days. After this she thought she had had a miscarriage; she had labour-like pains and slight hæmorrhage, and passed a piece of membrane, which was shown to a doctor, who said it was "a kind of miscarriage." After ten days the pain and the "show" stopped. After each of these attacks she had pain and difficulty in micturition and defecation, but this passed off. She had had continuous pelvic aching since the last attack, bad enough to keep her awake at night. Three weeks before admission she noticed a lump in the lower abdomen. She did not herself think she was pregnant.

On admission, the patient was thin and somewhat anæmic, and probably for this reason there was no distinct bluish tinge of the genital mucous membrane. There were no definite mammary indications of pregnancy. The veins on the surface of the breasts were rather large, but this, the patient said, had been the case since her child was born. There was a swelling of rounded outline rising out of the pelvis, reaching on each side to within two inches of the anterior superior iliac spines. Its highest point was to the left of the middle line, where it rose four inches above the pelvic brim. Per vaginam, the cervix uteri was found pushed forwards and to the right. The sound passed four inches forwards and to the right. Behind and to the left of the uterus was a firm elastic swelling, continuous with the abdominal tumour. The possibility of extra-uterine pregnancy was recognised, in spite of the patient's statement that she did not think she was pregnant. As the other possible conditions all indicated surgical interference, operation was advised.

On March 30th Dr. Herman opened the abdomen. A tumour was found behind and to the left of the uterus, pushing it forwards and to the right. The tumour was quite under the pelvic peritoneum, which at the sides and in front passed from the top of the tumour as a smooth sheet on to adjacent parts. Behind the tumour it dipped down to form Douglas's pouch. The tumour was punctured with a trocar, and some blood escaped. The finger inserted into the opening encountered a fœtus about six inches long, which was extracted. The sac, the wall of which was thick, was stitched to the abdominal wall. There was rather free hæmorrhage from its interior, which hot water failed to stop. The sac was therefore stuffed with iodoform ganze. No attempt was made to remove the placenta.

March 31st.—The gauze plugging was removed. The sac after this was washed out with a weak solution of iodine three or four times daily. There was no further hæmorrhage or other bad symptom. The temperature only once exceeded 100°.

April 11th.—The placenta could be felt by the finger inserted into the wound. As much of it as possible was separated by the finger, then seized with forceps and removed. The hæmorrhage provoked by this was so free that the cavity had to be again stuffed with gauze. The pieces of placenta and adherent clot removed weighed five ounces and a half.

12th.—The gauze plugging and some small loose pieces of placenta were removed. After this the wound was syringed twice daily, and on several occasions pieces of placenta were removed. The last large piece of placenta was removed on April 23rd. After that date only a few small shreds came away.

May 12th.—Patient discharged to go into the country. Quite well. Wound healed.

Remarks by Dr. HERMAN.—These cases, beside contributing to our knowledge as to the prognosis and methods of operation, present some points of interest. The first case illustrates what is certainly a common course, and what I believe to be the usual course, in tubal gestation. The hæmorrhage that takes place from rupture of the sac is at first slight, and slight hæmorrhages are often several times repeated before the grave and frequently fatal hæmorrhage occurs. These slight hæmorrhages are the cause of the severe paroxysmal pains, which are a well-known and characteristic symptom of extra-uterine gestation, and the cause of which has been much debated. The first, or one of the first, slight hæmorrhages may kill the fœtus. Then the case will end in spontaneous cure, its nature perhaps unsuspected. But if the growth of the fœtus has not been interfered with, then other and greater hæmorrhages will occur. Therefore, in a hæmatocele suspected to be due to extra-uterine gestation, augmentation in the size of the hæmatocele should be regarded as confirming the diagnosis, and as an urgent indication for operation. This opinion as to the usual occurrence of several hæmorrhages of different dates, and the cause of the paroxysmal pains, rests upon the facts that in almost every case cured by operation there has been evidence of hæmorrhages of different dates, and that in none of the few cases cured by operation before rupture has the diagnosis of extra-uterine gestation yet been made. Should

the early hæmorrhages not kill the fœtus, there may come a fatal hæmorrhage at any time. On the other hand, the tube may rupture towards the broad ligament, and gestation go on outside the peritoneum, as in the second case. The second case is an item of evidence as to the time at which removal of the placenta may safely be attempted. Twelve days after extraction of the fœtus, separation of the placenta was followed by dangerous hæmorrhage. The whole process of separation and removal of the placenta occupied twenty-four days.

NORTHAMPTON GENERAL INFIRMARY.

REMOVAL OF TWO LOOSE CARTILAGES FROM THE KNEE-JOINT; REMARKS.

(Under the care of Mr. R. A. MILLIGAN.)

THE treatment of loose cartilage of the joints is a subject of constant interest to the profession, and the operative treatment more especially so. The direct method of operation, which is the one now commonly employed, as in Mr. Milligan's case recorded below, was formerly a very fatal one. Larrey's statistics[1] on the point are very definite. Out of 129 cases operated on by the direct method twenty-eight were fatal; and Barwell's table[2] shows 8·4 per cent. of fatal cases. Now there is a strong feeling as to the safety of this operation, so much so that a recent author says: "This is another instance of an operation rendered safe and simple by the antiseptic treatment of Sir Joseph Lister. Removal by the direct incision will therefore be alone described here."[3] There is a difference of opinion as to the closure of the incision after removal of the loose cartilage. One authority recommends that no suture be used unless the wound be exceptionally large; another recommends a single fine catgut suture; sutures which carefully take up the capsule are advised by a third; and we have seen the capsule carefully sutured, the serous surfaces being apposed and the superficial wound closed with a second row of sutures. There is an increasing tendency to the omission of drainage-tubes and the employment of permanent dressings in the surgery of the joints. The notes of the case were taken by Mr. J. Terry, the resident dresser.

H. D——, aged twenty-three, a shoe-worker, was admitted into the infirmary on Jan. 17th, 1889. Twelve months previously the patient noticed that his right knee was swollen; it became very painful, and it continued in this condition for four months. He then went to the London Hospital, where the knee was strapped. He only attended there once, and, the knee becoming worse, he next went to St. Bartholomew's Hospital. Here he had a Scott's dressing applied, but the joint was not improved thereby. In October, 1888, the patient first noticed something hard on the inner side of the joint. The following month (November) he had a slight attack of rheumatic fever, which lasted about eight weeks. About the beginning of the year he came under the care of Mr. E. F. Jones, who sent him into the infirmary for the purpose of having the loose cartilages removed.

On admission, as the joint was much swollen, a back splint with foot-piece was applied till Jan. 30th, on which date the swelling had all gone down. Now, in addition to the first cartilage felt, a much smaller one had been discovered by the patient himself, but it was very difficult to keep in one position.

On Jan. 30th an incision two inches and a half long was made on the inner side of the joint over the situation of the larger-sized cartilage. Directly after opening the joint the cartilage slipped away, and it was necessary to make a prolonged search for it. After a good deal of difficulty the larger one was removed, but there was still more difficulty with the smaller one, which was found at the back of the joint between the bones. The wound was carefully sutured with silk, care being taken to include the capsule of the joint in just the same way as one includes the peritoneum in an abdominal section. Iodoform was dusted on the wound, and then a large dressing of alembroth gauze applied, the limb being put on a back splint with a foot-piece, and an icebag placed over the dressings.

Feb. 6th.—Dressings changed for the first time. No rise of temperature since the operation. Stitches removed.

20th.—Wound dressed for the second time; completely healed. No rise of temperature since the 6th. Patient allowed to get up with a ham splint on.

27th.—Splint left off. Knee strapped and bandaged.

March 13th.—Discharged. No swelling. Movements free and unimpaired.

Remarks by Mr. MILLIGAN.—Under antiseptic treatment it is perfectly safe to open the knee-joint, and therefore in these days it is, I suppose, the rule to cut down directly on the loose cartilage and remove it. On looking through Mr. Jacobson's valuable work on Surgical Operations, I find he recommends that the cartilage should be harpooned, so that it cannot slip away after opening the joint. This seems a most valuable suggestion, and I shall carry it into practice when I come across another case. By so doing, I should not have had to thoroughly explore the joint with my finger, and consequently prolong the operation considerably. I think it is important to bring the edges of the capsule carefully together, so that no discharge may gravitate into the joint. I might add that the larger cartilage was shaped like the patella, about an inch in length by three-quarters of an inch at the widest part. The other was round, and of about half an inch diameter.

KIDDERMINSTER INFIRMARY.

GLASS BEAD IN THE AIR-PASSAGES; TRACHEOTOMY; RECOVERY.

(Under the care of Mr. ADDENBROOKE.)

THIS case is one of some rarity, and may well be read in connexion with a case under the care of Mr. Pick which we published this year in the "Mirror."[1] In that case the foreign body was an earring impacted in one of the ventricles of the larynx, and it was removed afer extension of the tracheotomy incision through the cricoid. In this patient the foreign body was impacted in the sacculus laryngis, and it is interesting to note the symptoms to which it gave rise, more especially the unusual attack of dyspnœa on the fourth day, which was so severe as to resemble that produced by a displaced or blocked tube, and the severe paroxysmal coughing, which was so distressing that chloroform had to be administered.

Minnie F——, aged six years, was admitted on Dec. 21st, 1888. Her parents stated that while playing the previous evening the child suddenly swallowed a large bead and became suffocated, remaining so for a few seconds, then her breathing gradually became easier, and she was taken to a doctor, who turned her upside down and shook her, but without expelling the bead: she had occasional choking fits during the night.

On admission the child breathed with considerable difficulty, and during the next hour had two sudden attacks of paroxysmal coughing, with much dyspnœa, lasting a few seconds only. The respiratory murmur was much fainter all over the right lung than on the left side, except over the third right costal cartilage, where very loud sibilant rhonchus of a high-pitched tone was heard.

A consultation was held and tracheotomy performed. Directly the trachea was opened a very violent attack of coughing ensued, but the bead could not be discovered. After the operation the breathing improved and the cough ceased.

Dec. 22nd.—No alteration.

23rd.—Under chloroform the tube was removed and the child inverted and succussed, but without result; nor could the bead be felt with a probe. Breathing sounds on right side the same as on admission, with some fine crepitation in addition. Tube reinserted.

24th.—Child losing strength. Sick twice. Temperature 99·4°.

25th.—At 1 A.M. there occurred sudden acute dyspnœa, lasting about two minutes and ceasing suddenly. At 2.30 A.M. the patient awoke in a suffocating fit, and, after struggling violently for a few seconds, fell back apparently dead. Mr. Rust, the house surgeon, took out the tube, inverted the child, and slapped her on the back sharply. In about six seconds a loud crowing inspiration occurred. The tube was reinserted, and artificial respiration maintained for a few minutes, the child gradually regaining consciousness. She was then seized with incessant paroxysms of coughing, and

[1] Gaz. des Hôpitaux, No. 67.
[2] Ashhurst's Encyclopædia, vol. iv., p. 345, 1883.
[3] Jacobson: Operative Surgery, 1889.

[1] THE LANCET vol. i. 1889, p. 219

expelled some pus and a little blood through the tube. As the paroxysms continued, she was kept partially under chloroform for about an hour, and then fell asleep. The musical sound over the right bronchus had disappeared, and mucous râles were heard over the front of the lung; breathing took place entirely through the tube. At 9 A.M. chloroform was administered, the tube removed, and a probe passed upwards towards the sacculus laryngis, where a hard body could be felt. The wound was slightly enlarged upwards, and the bead (which was three-eighths of an inch in diameter, and perforated) removed with a vectis. Tube reinserted. The breathing rapidly improved.

26th.—Tube removed altogether.

There was a copious mucous discharge for two days, after which the wound rapidly healed, and the child was discharged well on Jan. 12th.

Medical Societies.

OPHTHALMOLOGICAL SOCIETY.

Monocular Suppurative Iritis.—Cavernous Angioma of Orbit.—Sarcoma of Ciliary Body.

THE last ordinary meeting of the Ophthalmological Society for the present session was held on July 5th; the President, Mr. J. W. Hulke, being in the chair.

Dr. ROCKLIFFE (Hull) read notes of a case of Monocular (?) Suppurative Iritis occurring in a girl aged eight years. For a week before admission she had suffered from "acute iritis," without lachrymation or photophobia. The family and personal history were exceptionally good. When examined, the right eye had no perception of light; there was acute iritis, the iris being studded with nodules, varying in size, their apices yellowish, their bases surrounded by bright-red vessels. No hypopyon; cornea clear; eyeball not tender; T + 1. In a week all pain had disappeared, and did not recur during the subsequent history of the case. Three weeks later the nodules had increased considerably in size, and two ciliary staphylomata had appeared. A month after this date the iris was becoming atrophic with T - 1; and two months later the staphylomata had entirely gone, and the iris was much disorganised; T - 2. The eyeball was excised six months after the first visit, when it was somewhat shrunken. On section there was found to be total posterior synechia, with thickening of iris and ciliary body, degeneration of lens, and detachment of retina. Dr. Brailey examined the specimen microscopically, and reported: "Rounded collections of cells, clearly new growth, probably inflammatory, on the inner aspect of the iris and ciliary body, and in and behind the base of the iris; to a less degree in the remainder of the iris. The central cells of these collections exhibited signs of inflammation, but an absence of the characteristics of tubercle. One small collection was present in the choroid. He considered that the case was one of irido-cyclo-choroiditis of a peculiar nature, with many of the features met with in sympathetic inflammation." Dr. Rockliffe referred to cases reported by Hutchinson, Eales, Nettleship, Lang, and Benson, and thought the evidence was more in favour of inflammatory new growth than tubercle or syphilitic gummata.—The PRESIDENT understood the speaker to regard the case as one of inflammatory neoplasm. If that were so, what started the inflammation there? Were any bacilli present?—Dr. ROCKLIFFE regretted that bacilli had not been looked for.—Dr. W. J. COLLINS said that a case he had recorded closely resembled the one discussed; the inflammation occurred in one eye only, was plastic in character, and nodules of pinkish-grey lymph were present. The vision was not greatly affected, and the case did not go on to suppuration. He described it under the name of "granulation iritis," and subsequent researches had not enabled a better name to be found for it. In the eighth volume of the Moorfields Hospital Reports, Mr. Jonathan Hutchinson, in a paper on "Iritis occurring in Children above the age of Infancy," had related five cases; in not one could syphilis be totally excluded, and in more than one it was distinctly proved to be present. He thought that these cases were generally due to some slight traumatism which had been overlooked.—Dr. MULES suggested that if any material were still available a search for bacilli should be made.—Dr. ROCKLIFFE, in reply, said that there was absolutely no history of injury, and he regretted that there was no material at hand which could be examined for micro-organisms.

Dr. EMRYS JONES (Manchester) communicated a case of Cavernous Angioma of the Orbit. The patient was a girl aged eighteen, who first came under observation in June, 1884, with protrusion of the left eyeball, which had been slowly increasing for nine years. The proptosis then measured an inch and a half, and an elastic tumour could be felt enveloping the eyeball. There was no pulsation, fluctuation, or pain. Downward movement of the eye was lost, and other movements diminished; the pupil reacted to light; the optic nerve was pale, and V = 14 J. On July 17th, ether was administered, the globe enucleated, and a cone-shaped tumour contained in a capsule scooped out. The optic nerve was found embedded along the inner aspect of the growth, which measured 8 centimetres × 7 centimetres × 5 centimetres. Microscopically the growth consisted of an open sponge-like framework of fibrous tissue, with numerous round, sinuous, irregular cavities filled with blood. Sections of the growth were shown.—Mr. HULKE referred to a specimen of cavernous angioma of the orbit which had been placed in the Moorfields Hospital museum by the late Mr. Critchett, who obtained it from a young boy. He remembered that there was no obvious pulsation, and that the protruded globe could easily be put back into its normal position, showing that no solid mass lay behind it.

Mr. SIMEON SNELL (Sheffield) related notes of two cases of sarcoma of the ciliary body. The first occurred in a woman aged sixty-two, whose right eye was affected. She was first seen on Dec. 2nd, 1879, and said that a spark from the fire had struck the eye sixteen months before; it was, however, well in a few days. Some months afterwards she first observed a dark brownish speck in the upper and inner ciliary region; it was then about the size of a pin's head. When seen vision was good, and there was no pain. The elevation in the ciliary region was the size of a small pea, and extended close up to the cornea; it was also visible internally, and extended for some distance close to the ciliary margin of the iris. The patient disappeared for a time, but returned with the growth enlarged. Enucleation was performed on Aug. 30th, 1880, and the tumour was a melanotic sarcoma. The second case occurred in a man aged seventy-four, who was first seen in April, 1883, when he complained of increasing dimness of sight of his right eye. There was then some opacity of the lens. In February, 1884, when he again presented himself, there was a blackish discolouration, and some bulging of the sclerotic (ciliary region) above. Vision was lost. The eyeball was excised on March 24th, 1884. The tumour was much larger than the external appearances suggested, about the size of a bean, and had the appearance of a pigmented round-celled sarcoma. The patient was reported alive and well, and showed no evidence of recurrent growth, although more than five years had elapsed since the operation.

The following patients and card specimens were shown:—Mr. L. WERNER: Microscopical Preparations illustrating Subconjunctival Cysticercus.—Dr. BUZZARD: On a Method of Employing Electricity in Ocular Paralysis.—Mr. HARTRIDGE: Ophthalmoscopic Drawing of Peculiar Appearance at the Macula.—Mr. CRITCHETT: Scissors for Division of Anterior Synechiæ.—Dr. S. H. HABERSHON: Case of Uniocular Central Scotoma.—Mr. LLOYD OWENS: Specimens showing exhibitor's method of Mounting Eyeballs.—Mr. BRAILEY: Peculiar Thickening of the Anterior Part of the Conjunctiva and of the Subconjunctival Tissue in a Child, probably tubercular.

The annual general meeting was then held, and the reports of the Council and of the treasurer were read and adopted. A vote of thanks to the retiring President, Mr. Hulke, was moved by Mr. Anderson Critchett and seconded by Mr. Simeon Snell. Mr. HULKE briefly but felicitously replied. The ballot for the election of the officers and Council for the ensuing year resulted as follows:—President: John Hughlings Jackson, M.D., LL.D., F.R.S. Vice-Presidents: Thomas Buzzard, M.D., George Cowell, John Whitaker Hulke, F.R.S., David Little (Manchester), Priestley Smith (Birmingham), and H. R. Swanzy (Dublin). Treasurer: Wm. M. Ord, M.D. Secretaries: James Anderson, M.D., and A. Quarry Silcock. Librarian: W. Adams Frost. Other Members of Council: A. H. Benson, M.B. (Dublin), G. A. Berry, M.B. (Edinburgh), Edgar A. Browne (Liverpool), Robert Marcus Gunn,

Gustavus Hartridge, Frank H. Hodges (Leicester), W. H. H. Jessop, J. G. Mackinlay, M. M. McHardy, Seymour J. Sharkey, M.B., Treacher Collins, and Samuel West, M.D.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on Wednesday, July 3rd, Dr. A. L. Galabin, President, in the chair.

Laceration of the Vagina in Labour.—This communication was read by Dr. J. MATTHEWS DUNCAN, physician-accoucheur to St. Bartholomew's Hospital. The author had recently observed two cases of a remarkable vaginal abscess in women recently confined; the symptoms were alarming. He attributed them to laceration of submucous cellular tissue and consequent hæmatoma. They were characterised by a rounded opening admitting the tip of the finger, which when pressed entered a cavity as large as a walnut.—Dr. HAYES had recently seen a case which lent support to Dr. Duncan's opinion. A primipara, over thirty years of age, complained of pain in the vagina and vulva a few days after delivery, which had been slow but normal. There was a short perineal tear. Slight febrile disturbance arose and vaginal pain became extreme. Upon further examination, a semi-fluctuating swelling of the size of a Tangerine orange was felt in the vagina near its orifice. A well-known surgeon, who thought that the swelling was an abscess, subsequently laid it open; but its contents proved to be chiefly blood-clot mixed with purulent grumous fluid. Dr. Duncan's cases might, of course, have had a septic embolic origin.—Dr. CLEVELAND noticed that in both cases the short forceps was used, yet Dr. Duncan thought that in neither could the laceration be attributed to that instrument. If the author of the paper had himself operated, there would have been no need to raise the question; but Dr. Cleveland submitted that a strong guarantee was requisite, under the circumstances, for excluding the probability of a wound having been accidentally inflicted.—Dr. HERMAN had seen one curious case of laceration of the vagina of a class to which allusion was made by Dr. Duncan, though not included in the main subject of his paper. The case occurred in a patient with a flat pelvis. The head entered the brim with its long diameter transverse, and was delivered with forceps applied at the sides of the pelvis. After delivering the head and removing the forceps, Dr. Herman was awaiting some indication of uterine action, that he might assist in the delivery of the shoulders, when he saw the hand protrude through the anus, the uninjured perineum being between the hand and the head. Then uterine action came on, and the shoulder was driven down, tearing through the recto-vaginal septum from above downwards.—Dr. CHAMPNEYS had met with two cases, some years ago, in hospital practice, and both proved fatal from septicæmia. In one case the forceps was used to terminate labour for eclampsia; very little force was necessary. In the other, labour was natural and apparently easy. In both, the openings were round and unlike lacerations. In the second case the cavity looked unhealthy, and the veins starting from the placental site and also the internal iliac veins were full of pus.—Dr. BOXALL related the case of a weakly primipara, who died seventeen days after delivery. Vaginal examination on the eleventh day revealed a thickening at the roof of the vagina fixing the cervix, but no laceration. At the necropsy, two holes were found, quite at the upper part of the vagina and immediately in front of the cervix. Each hole was the size of a sixpence. They lay one on each side of the middle line, and a smaller hole, of sufficient size to admit a goosequill, was found below and between them. They intercommunicated and led to a large cavity beneath the mucous membrane. The nature of this condition was doubtful. Dr. Boxall was now disposed to consider the cavity as originating in a hæmatoma which had subsequently suppurated and opened spontaneously into the vagina.—Dr. HORROCKS described a case, which he saw with Dr. Lynn of Woolwich, where a hæmatoma formed between the vagina and rectum, which broke down and opened by a pinhole orifice into the vagina. It was freely incised, and soon healed. In a second case the patient complained of great pain in defecation. On examination, a lump was felt in the submucous tissue of the posterior wall of the rectum. Dr. Horrocks asked if this might not have been caused by pressure during parturition, the intervening structures not being lacerated.—After some observations by Dr. W. S. A. GRIFFITH, two cases were described by Dr. HERBERT SPENCER. They occurred in primiparæ delivered naturally. In one (inflammation in the usual situation being absent) there was induration of the recto-vaginal septum low down in the middle line, attended by high fever and followed by the discharge of pus and blood into the vagina from a ragged cavity by a hole the size of a pea. This had led him to diagnose suppurating thrombus. The other case was similar, but not observed to the end. Systematic examination of patients some time after labour would probably prove that injuries of the vagina were more common than was at present supposed.—After Dr. CARTER had discussed the subject, Dr. MATTHEWS DUNCAN replied. He had dissected, in Paris, several puerperal fever cases, and was astonished at the frequency of submucous vaginal ecchymosis or thrombus. The case of thrombus of the pudendum mentioned in his paper showed that blood might so accumulate to a very great extent when there was a large opening for its exit. These facts were the bases of his theory of the peculiar abscesses already described. Dr. Duncan was familiar with longitudinal lacerations of the vagina, spontaneous and by forceps. He had seen many of them in consultation, when alarming symptoms supervened after delivery, and had observed them in his own private practice. Such lacerations could not be confused with the lesion he now described, for in the latter there was no evidence of laceration.

Chorea in Pregnancy.—The author of this paper, Dr. MONTAGU HANDFIELD-JONES, said that the causes which lead to the production of choreic symptoms were probably numerous. The various theories which have been formulated to explain the causation of the disease might each have its application in different cases. In this communication the author drew attention to the disease solely when it occurred in pregnant women; illustrating by two cases one pathological process by which the symptoms of the disease might be caused, and by which they might reasonably be accounted for. The chorea of pregnancy was considered by itself, since in all cases of this variety of chorea there existed one common groundwork—namely, an unstable condition of the nervous system. This condition was always present in the gravid constitution, of which it formed an integral part.—Dr. JOHN PHILLIPS, in referring to cases of severe chorea in children, spoke of two methods of treatment not mentioned in the above communication—namely, the warm wet pack, which often had a marvellous effect in quieting the movements, and forcible feeding by Paley's bottle, when there was much exhaustion. These methods seemed quite suitable for the chorea of pregnancy.—Dr. HORROCKS believed that chorea was a blood disease in its origin, related to rheumatism. He spoke of the theory of the detachment of fibrinous shreds from the cardiac valves, which shreds, when carried up to the cerebral vessels, were believed by some authorities to account for the phenomena of chorea. In pregnancy, an acknowledged cause of chorea, the blood was certainly altered. Fright was a potent factor in the production of chorea and also of hystero-epilepsy, and even of true epilepsy, as in a case he had observed where there was no hereditary predisposition.—Dr. ARTHUR JAMISON described several cases where chorea was clearly due to fright in pregnant women and others; hence it could hardly be a blood disease. He strongly advocated strong doses of conium. In one severe case where arsenic, iron, &c., had proved useless, marked benefit immediately followed the use of that drug.—Dr. HERMAN believed in the connexion between chorea and pregnancy. The majority of such cases were benefited by the induction of abortion or premature labour, but not all. There were no rules by which the obstetrician could distinguish the cases which would from those which would not be relieved by that treatment. Such rules could only be established by study of careful clinical reports like those in Dr. Handfield-Jones's paper. Dr. Herman did not agree with the author in his opinion that there was no organic change in chorea. Phrases like "exalted nerve sensibility" conveyed no instruction. The symptoms indicated organic changes, though as yet we had not the means of detecting them, nor could chorea very well be a blood disease, since it was usually unilateral. Blood diseases were marked by symmetrical phenomena.—Dr. AMAND ROUTH related a case of chorea, associated with a low form of puerperal insanity, in a nullipara aged twenty. She was single, and pregnancy was ascertained

on his examining the patient; the condition had previously been overlooked. Copeman's digital dilatation of the cervix was effected, but abortion ensued within a few hours, and in three or four days, in spite of a sapræmic attack, almost all the chorea had disappeared, and the patient became rational. In respect to the blood theory, Dr. Routh noted that almost all cases occurred during the first three months of pregnancy, when the blood state was but little altered.—Dr. MATTHEWS DUNCAN had recently seen a patient in whose two early pregnancies there was severe unilateral chorea, so exhausting as to demand induction of labour in the second pregnancy. In the first, twins were born alive at the fifth month. In both attacks there was no anxiety, except on account of weakness. The temperature did not rise, nor were there signs of cardiac or renal disease. Medicines did no good. After the premature delivery recovery was rapid.—In reply, Dr. M. HANDFIELD-JONES pointed out that in his communication he had not attempted to discuss the possibility of chorea depending, in some instances, on blood conditions or on organic changes in the nervous structures. His cases were quoted solely to show that the chorea of pregnancy was sometimes an outward sign of deranged function of nervous centres, and existed quite apart from any appreciable change in those tissues. He admitted that chorea was sometimes only one item in the rheumatic series, as Dr. Cheadle had recently pointed out in his Harveian lectures. It could hardly be shown, however, that this point had any application in the cases now under consideration. If the chorea had depended on any lesion of tissue, the interchange between insanity of the muscles, delirium of the higher intellectual centres, and paralysis could hardly have taken place so rapidly.

The following specimens were exhibited:—Mr. MEREDITH: Solid Tumours of the Ovaries.—Dr. CULLINGWORTH: Hæmato-salpinx removed by Operation.—Dr. PLAYFAIR: Uterus Extirpated for Malignant Disease.—Dr. HORROCKS: Rupture of Uterus.—Mr. ALBAN DORAN: Fragment of Membrane passed from the Uterus.—Mr. C. STEWART POLLOCK: Dermoid Cyst of the Ovary of a Mare.

Reviews and Notices of Books.

Diseases of the Eye. By GEORGE A. BERRY, M.B., Ophthalmic Surgeon to the Edinburgh Royal Infirmary. With Coloured Illustrations from Original Drawings. Edinburgh and London: Young J. Pentland. 1889.

THIS is a good book, written by a competent man. It is exceedingly well got up, and presents the novelty of coloured illustrations (printed, we presume, from wooden blocks), introduced into the text. Some of these are excellent, some indifferent, some poor. Amongst the good ones are those representing distichiasis, phlyctenular and pustular conjunctivitis, pterygium, normal and abnormal condition of the lacrymal passages, interstitial and punctated keratitis, dislocation of lens, iritis, glaucoma, retinitis pigmentosa, embolism, detachment of the retina, and glioma. Amongst the indifferent ones are those showing hypopyon, keratitis, lamellar cataract, and staphyloma. We think Mr. Berry, or rather Mr. Tatham Thompson, who made the original drawings, might have given better examples of fascicular keratitis, in which the vessels are too coarse; of episcleritis, which is made to look too formidable; of trachoma, in which the cicatricial stage only is shown; and of conical cornea, of which it would have been easy to make a recognisable drawing. In the drawing showing albuminuric retinitis, no hæmorrhages are shown, though these are very common and very characteristic features of the disease. On the whole, the illustrations are good, and those that are good far outnumber those that are inadequate representations of the diseases intended to be shown. In regard to the text, the usual topographical arrangement is followed, beginning with the lids and lacrymal apparatus, the conjunctiva, cornea, iris, choroid, and retina. Special chapters are devoted to the important subjects of glaucoma, foreign bodies in the eye, and sympathetic ophthalmia. The operations are relegated to the end of the volume.

In speaking of Cataract, Mr. Berry leaves it an open question whether iridectomy should be performed or not, and believes the most suitable cases for extraction without iridectomy are those in which the cataract is not only mature, but very soft. No doubt such cases do well, but many cases of hard cataract succeed admirably if the corneal wound is sufficiently large, and the iris is not bruised in the process of extraction. Mr. Berry, if we read his remarks aright, only applies a pad and bandage to the eye operated on. Surely it is more prudent to close both eyes for a few days, even if only with a piece of court-plaster. We have failed to notice any remarks on the treatment of prolapsed iris after operation without iridectomy, though there is much to be said on the point.

The subject of Glaucoma is well treated. In regard to the etiology, a little more stress might have been laid on the theory of Donders, supported as it is by the observations of Hippel and Grünhagen, that glaucoma is really a neurosis of the fifth nerve, leading to hyper-secretion. At any rate, there is good reason for believing that glaucoma may have a centric origin quite independent of any peripheral disturbance, such as closure of the canal of Fontana or enlargement of the lens.

The chapter on Sympathetic Ophthalmia is judiciously written. Mr. Berry, in opposition to many foreign authorities, but, we believe, quite correctly, refuses to admit the existence of sympathetic keratitis, choroiditis, neuritis, retinitis, detachment of the retina, or glaucoma, or at least thinks the evidence hitherto adduced to be exceedingly unsatisfactory. He quotes impartially the opinion of the committee of the Ophthalmological Society on Sympathetic Ophthalmia, and that of Mr. Gunn, though the latter observer is at issue with most ophthalmic surgeons in thinking that wounds in the ciliary region are not exceptionally dangerous. He appears to accept the germ theory of the implication of the second or sympathising eye, without committing himself to naming the particular germ that induces the attack.

In the chapter on the Refraction and Accommodation of the Eye, the subject is treated rather more scientifically than is customary, pointing to the conclusion that the ophthalmic surgeon of the future must not only be a sound surgeon, but will have to possess something more than a mere smattering of mathematical knowledge. We notice, in passing, whilst recommending the slitting up of the canaliculus, that Mr. Berry disapproves of the passing of large probes down the nasal duct. Whilst describing the treatment of cases that have passed through the stage of acute dacryo-cystitis, he does not afford any information as to the proceedings to be adopted when the presence of dead bone is recognised on passing the probe—a circumstance of frequent occurrence.

The subject of Detachment of the Retina is treated in more detail by Mr. Berry than is usual in English works. The causes he assigns for its occurrence are cyclitis, tumours, inflammation of the retina, and injuries. He states that the retina may be detached at any part, but that in a large proportion of cases some part of the upper half is detached. Thus, of 126 cases occurring at Göttingen only 39 were found not to involve some portion of the upper half of the retina. We should have thought the proportion was not so great as this; and it may be observed that Galezowski and Daguenet state that "in the great majority of cases the detachment takes place in the infero-external part of the retina." The prognosis is, as Mr. Berry says, always bad. An explanation of the cause of detachment cannot at present be satisfactorily given. Is it due to shrinking of the vitreous or to elongation of the

globe? It is certainly most common in myopic patients. Mr. Berry does not place much reliance on therapeutic agents in the cure of this disease, and does not promise much success from operative proceedings—such, for example, as puncture from before or from behind.

We have much pleasure in recommending Mr. Berry's work to students, considering it to be a valuable addition to ophthalmic literature.

Psycho-Therapeutics; or Treatment by Sleep and Suggestion. By C. LLOYD TUCKEY, M.D. Pp. 80. London: Baillière, Tindall, and Cox. 1889.

IT is more than half a century since Harriet Martineau was induced to try the effects of mesmerism, and, in the first enthusiasm of a convert, wrote a series of letters upon the subject. In these she protested vehemently against professional neglect of mesmerism and the "reserve of the squeamish," by means of which the "infinitely delicate mechanism and organisation of brain, nerves, and mind are thrown as a toy into the hands of ignorant persons." More recently mesmerism, hypnotism, and animal magnetism have had no need to complain of lack of attention. As a therapeutic agent hypnotism has been openly practised in many French hospitals; it has formed the subject of innumerable papers and books, and a special journal has been published for the record of its marvels. Dr. Lloyd Tuckey, in the belief that the Liébault method of treatment by suggestion has not even now received in this country the scientific attention it merits, collects together in the book before us many interesting records of Psycho-Therapeutics. The construction is slight: the book only consists of five chapters, and of these the first two are devoted to a demonstration of the power of the mind over the body—a proposition which is supported by a narration of instances of cures at shrines and holy places, of touching for "king's evil," and kindred subjects selected from a tolerably wide area. The third chapter gives a description of the treatment pursued by Dr. Liébault of Nancy. It is apparently based on the theory that the effects of directed consciousness are greatly increased under certain conditions when the mind is so withdrawn from consideration of all extraneous ideas as to be absolutely concentrated upon one object. After about two minutes of "talk about sleep," the patient is hypnotised sufficiently to receive the "suggestion" which predicts an amelioration or the disappearance of the morbid conditions and symptoms. Admitting that some "cures" may result when the "reasonable and deliberative side of the patient's brain is suppressed, while the emotional or instinctive side is developed," it is somewhat surprising to read the author's list of some diseases which are found to benefit from treatment by suggestion. This list includes rheumatism and gout, anæmia, general debility, "derangement of the functions in women," chronic constipation, diarrhœa, muscular cramp, skin diseases, and deafness. The catholicity of psycho-therapeutics may further be gathered from the statement that, "wherever we find chronic disease resisting the usual methods of treatment, suggestion may be thought of as a useful ally." The last chapter contains reports of cases derived from Bernheim's book on "Suggestive Therapeutics"; the degree of abridgment, and the elimination of a diagram, appear to be responsible for the statement that the unintelligible scrawl on page 50 is "fairly legible." The twenty-three cases quoted from Bernheim and others occupy eighteen pages, and serve as an excuse for the omission of a short chapter of the author's own experience of the treatment, the "bounds originally fixed for the little book having been already exceeded." This reads rather like the words "Time up," so often seen at the end of examination papers, and will probably receive the same amount of credit.

The Bacteria of Asiatic Cholera. By E. KLEIN, M.D., F.R.S. London: Macmillan and Co. 1889.

IT is not a little remarkable to note how the interest awakened five years ago by Koch's discovery of the comma bacillus in the dejecta and intestine of subjects of Asiatic cholera, and his inference as to its causal relationship to that disease, should have so completely abated. The discovery was a notable one, and promised much. Naturally it was subjected to much criticism, and it may be that the fresh facts thus brought to light concerning the bacteriology of the human alimentary tract have been responsible for part of the diminution in interest to which we have referred. No single observer has contributed more to the knowledge on this subject than Dr. Klein, and the work before us is a thoroughly scientific exposition of it in all its bearings. As we understand him, Dr. Klein's position with regard to the question is this. He admits the frequency with which the comma bacillus occurs in cholera, but sees no ground for its being the cause of the disease, although its presence may be of some diagnostic value; and he does not find, as a rule, any evidence of the penetration of the intestinal mucosa by the bacillus. He describes the varieties of similar organisms that have been met with in other conditions, as well as other bacterial forms met with in cholera; whilst he points out the difficulties in the way of accepting the view that this special form of bacillus is the cause of a disease, the prevalence of which is so much determined by seasonal and other influences. He defends himself against the criticisms passed by Messrs. Macleod and Milles upon his experiments; whilst a perusal of his book cannot fail to leave the impression that there is still much to be learnt concerning cholera and its relationship to bacterial life.

SMALL TEXT-BOOKS OF CHEMISTRY.

A TORRENT of small manuals of theoretical and practical chemistry is constantly pouring from the press. We cannot tell how many were in existence a year ago, and now our table is covered with new ones. The teacher is bewildered with the advice offered to him, and the rapid multiplication is so completely out of proportion to the real wants of the student that it cannot be looked upon with entire satisfaction. We include in this notice those books which appear to possess most merit, and gladly admit that among them are some which are really valuable, and to some extent novel.

Elementary Inorganic Chemistry, Theoretical and Practical, with a course of Chemical Analysis and a series of examples in Chemical Arithmetic. By A. HUMBOLDT SEXTON, F.R.S.E., F.I.C., F.C.S., Professor of Metallurgy in the Glasgow and West of Scotland Technical College, &c. London: Blackie and Son.—The theoretical portion is much like that found in dozens of other text-books, fairly accurate, but with no trace of novelty that we can discover. Directions for calculations and many questions are appended, and there is a short and not very excellent sketch of qualitative analysis.

Mechanics and Experimental Science as required for the Matriculation Examination of the University of London. By ED. AVELING, D.Sc., Fellow of University College, London. Chapman and Hall.—Another examination book; useful for crammers and those who require cramming, but not to be regarded as a seriously scientific book.

A Class-book of Elementary Chemistry. By W. W. FISHER, M.A., F.C.S., Aldrichian Demonstrator of Chemistry, formerly Fellow of Corpus Christi College, Oxford. Clarendon Press.—A compact little manual of inorganic chemistry written by a well-known and accomplished chemist. Any

teacher might use it with advantage, and doubtless many will; but we cannot see that it is better than many pre-existent books with which it must come into competition. Among the few defects of the book we must notice an occasional looseness in the formulæ employed for elements. To describe nascent hydrogen as H_2 (p. 147), and carbon as C_4 (p. 165), is inaccurate and unnecessary.

Notes on Analytical Chemistry for Students in Medicine. By ALBERT J. BERNAYS, Ph.D., F.C.S., F.I.C., Professor of Chemistry at St. Thomas's Hospital, &c. Third Edition. London: J. & A. Churchill.—This excellent, accurate, and well-arranged synopsis fully deserves the success it has met with. Practically it is a fifth edition, for the first four were included in the author's "Notes for Students in Chemistry," and it has been revised and expanded with evident care. It is well adapted for the needs of students of medicine, for it affords valuable aid, not only in pure chemistry, but also in toxicology and physiological chemistry.

A Course of Quantitative Analysis for Students. By W. N. HARTLEY, F.R.S., Professor of Chemistry and of Applied Chemistry, Science and Art Department, Royal College of Science, Dublin. London: Macmillan and Co.—For a first course of quantitative analysis, this little work is quite satisfactory; but, except that modern methods are well represented, there is no particular novelty. In the introductory portion there are many useful hints—as, for example, in regard to the toughening of filter papers for use with filter-pumps; and the progressive exercises in gravimetric and volumetric analysis are well chosen and clearly explained. The section on alkalimetry and acidimetry (p. 88) is a good example of the author's style. It is admirable, and any intelligent student could follow out the directions without supervision. It would, however, have been as well to have given a few more words to the modern indicators, particularly phenol-phthalein and methyl-orange, which offer distinct advantages over litmus. The book has neither table of contents nor index, which is a pity.

Dr. Rideal—whose recent appointment to the chair of Chemistry in St. George's Hospital is welcome to chemists—has, in *Practical Organic Chemistry* (H. K. Lewis, 1889), given us a convenient little guide for the detection and examination of some of the more important organic compounds. He has wisely included simple notes as to the structure of the compounds included in the course, which will be a great help to students who want to acquire more than a mere dexterity in identification. We think he has made a mistake in not giving a scheme for systematic analysis, for, although the best students can prepare this for themselves, many fail lamentably in the attempt, and it is a serious tax upon the time of all. The recent alterations in the syllabus of the University of London will compel Dr. Rideal to revise and somewhat enlarge his next edition, and he will then, doubtless, correct a few errors (such, for example, as the formula for citric acid on page 18) which have escaped his notice.

Laboratory Manual of General Chemistry. By R. P. WILLIAMS, A.M., Instructor in Chemistry, English High School, Boston. Boston: Ginn and Co. 1888.—A note-book of the simplest kind, intended to facilitate the practical teaching of chemistry in schools. Sufficient directions are given for the performance of a number of simple experiments. The directions are given in the fewest possible words, and abbreviations are used to a somewhat inconvenient extent. The text only fills about one-half of a page, the remainder and the opposite page being left blank for notes. It seems well adapted for the purpose for which it was devised.

The Analyst's Laboratory Companion. By A. E. JOHNSON, Assoc. R.C.Sc.I., &c., is a useful collection of notes and tables of constants valuable in every laboratory.

HEALTH OF TRINIDAD.

THE Surgeon-General of Trinidad, in his annual report for 1888, states that the health of the colony had not been satisfactory, a severe epidemic of dysentery having prevailed during a considerable period of the year. The number of deaths from dysentery and diarrhœa in Port of Spain was 491, but no statement is given of the population among whom they occurred. In the preceding year the deaths were only 99. There were 631 cases treated in hospital, and of these 200 died. Mr. Crane says that "of the deaths out of hospital, the number actually due to dysentery cannot be stated, as but a small proportion were attended or certified by a medical practitioner." The death-rate from other causes than dysentery is stated not to have exceeded the average. The hospitals were continually overcrowded during the year; they seem, in fact, to have been converted into poorhouses. This probably contributed in no small degree to the large proportion of deaths to cases. The total deaths in the district hospitals throughout the island, exclusive of the Lunatic and Leper Asylums and the House of Refuge, amounted to 10 per cent. of the cases. "Most of the medical officers speak of the hopeless state in which many of the patients are admitted. There seems little prospect of any improvement in this direction until a system of poor relief is established and brought within the reach of the destitute." The Lunatic Asylum had an average of 356 patients, with 64 deaths, or 179·8 per 1000. There was a marked decrease in the number of admissions, especially of the East Indian immigrants.

The report on the Asylum for Lepers is of much interest in connexion with the recent scare in England on the subject. There were 38 cases admitted during the year, and of these 6 died—3 of phthisis, 2 of kidney disease, and 1 of phthisis and kidney disease; 11 were natives of India, 21 of Trinidad, 3 of other islands in the West Indies, and 1 of Demerara, Venezuela, and Madeira respectively. The average number under treatment was 176, and the deaths, including those already mentioned, were 16, or 9·1 per cent. of the cases, the lowest death-rate recorded. "The small mortality may be ascribed to improved hygienic conditions, a wholesome dietary, rich in animal food, the cultivation of industrial pursuits by the inmates, and other measures tending to promote their happiness and comfort. ..... The late Dr. Milroy, on his visit to the asylum in 1872, recommended a rich dietary and ample employment as the best means of arresting the progress of this dreadful malady. The experience since gained has tended to prove the correctness of his views." Dr. Beaven Rake, the medical superintendent of the asylum, made a number of experiments on the cultivation of the bacillus lepræ, the details of which are tabulated in the appendix to the report. Of these, 65 were experiments on nutrient media, 21 experiments on living animal tissue, and 12 experiments on putrescent substances. His conclusions are thus summarised: "1. At a tropical temperature, and in the ordinary nutrient media, I have failed to grow the bacillus lepræ. 2. In all animals yet examined I have failed to find any local growth or general dissemination of the bacillus after inoculation, whether beneath the skin, in the abdominal cavity, or in the anterior chamber. 3. Feeding with leprous tissue has also given negative results. I have found no growth of the bacillus lepræ when placed in putrid fluids or buried in the earth."

The average number of inmates of the House of Refuge was 190, of whom 57 died, being in the ratio of 30 per cent.; but this high rate is not surprising when we find that of 282 who were in the house in the course of the year 198 had been admitted on account of old age, destitution, and incurable bodily infirmity; 91 of these were above seventy, and 1 was stated to be above 100 years old.

The report does not give any statistics of the population or of the general mortality; the number of deaths, except in the hospitals, being given for Port of Spain only, and the number living not being stated. If the records exist from which a general summary of the vital statistics of the island could be prepared, it would add materially to the value of the Surgeon-General's report.

THE LANCET.

LONDON: SATURDAY, JULY 13, 1889.

SINCE the judgment of Lord COCKBURN in the case of LA MERT *v.* the General Council of Medical Education and Registration in 1863 (see THE LANCET, Nov. 28th, 1863), there has been no such important deliverance as that of the Court of Appeal in the case of ALLBUTT *v.* the General Council of Medical Education (a report of which will be found in another column of our present issue), which must stand as the legal definition of the powers and duties of the Medical Council in regard to charges affecting the conduct of registered medical men. The judges of the Court of Appeal have taken many weeks to consider the questions now settled, and the practical result of this consideration is to confirm to the fullest extent the original judgment of Lord COCKBURN, reaffirmed in the ALLBUTT case by Mr. Baron POLLOCK, and further to decide a new and important point — viz., the right or privilege of the Council to publish its judgments in such cases in its Minutes. For the sake of clearness we may recall the points of Mr. ALLBUTT'S case from the beginning. Mr. HENRY ARTHUR ALLBUTT, M.R.C.P. Edin., L.S.A., in general practice in Leeds, published in 1887 "The Wife's Handbook." This pamphlet was brought under the notice of the Council by the Leeds Vigilance Association. It was referred for examination to a committee of inquiry. It was then considered by the Branch Council for England. Finally Mr. ALLBUTT was summoned to appear before the General Medical Council in November, 1887. He did appear, but preferred to be heard through his counsel, Mr. ROBERT LAMB WALLACE, who, it will be remembered, addressed the Council on behalf of his client for the greater part of two days' sitting. The result was that the Council passed the following resolutions:—"(*a*) That, in the opinion of the Council, Mr. HENRY ALLBUTT has committed the offence charged against him—that is to say, of having published and publicly caused to be sold a work entitled 'The Wife's Handbook,' in London and elsewhere, and at so low a price as to bring the work within the reach of the youth of both sexes, to the detriment of public morals; (*b*) that the offence is, in the opinion of the Council, infamous conduct in a professional respect; (*c*) that the Registrar be hereby directed to erase the name of Mr. HENRY ARTHUR ALLBUTT from the Medical Register." Mr. ALLBUTT resented this judgment of the Medical Council, and was advised, fortunately perhaps for the discipline of the medical profession and the good of the public, to seek to have it reversed in the Law Courts. The true instinct of a medical man in professional matters, or matters of professional conduct, is to court the judgment of his profession or those who represent the profession. The soundness of this instinct is recognised in all professions, apart from the sanction of it in law. But it is abundantly recognised and sanctioned by Act of Parliament—certainly in the legal profession, and not less so in the medical profession under the Medical Acts. This will no longer be questioned after the lucid and decided judgment of the Supreme Court of Judicature which we publish this week. We do not claim infallibility for the judgments of the Medical Council any more than for those of the Law Courts. But they are the nearest way to the sense of professional morals and conduct. The Council consists of members of the profession coming from all quarters of the kingdom, and representing every branch of practice. It acts under a great sense of responsibility, and after due inquiry and a most patient hearing of the accused or his counsel. The very fact that its judgment is final, and cannot be reviewed in the Law Courts, adds to this sense of responsibility. It was a bold step on the part of Mr. ALLBUTT to question the judgment of the Medical Council. But we do not regret that he did so, for the twenty-six years that have elapsed since Lord COCKBURN'S judgment in the LA MERT case have led medical men to forget to some extent the formidable function of the Medical Council of judging in serious questions of professional conduct. Mr. ALLBUTT sought to have the question settled by the Medical Council reviewed in the Law Courts in two senses. First, he sought to have it reversed altogether on the ground that the Medical Council had no jurisdiction to erase Mr. ALLBUTT'S name for publishing a book. Mr. JELF, Q.C., argued on May 31st, before the Lord Chief Justice, Lord Justice LINDLEY, and Lord Justice LOPES, that even if the book was improper, publishing it was not improper in a professional respect. Mr. JELF argued further that there had been no "due inquiry"; and also that the publication of the proceedings before the Council in the Minutes was a libel by the defendants on the plaintiff; that the Council was not an open court, and therefore the publication of its proceedings was not privileged. The Court at once decided not to touch the principle of the decision of Lord COCKBURN—that a medical practitioner accused of "infamous" behaviour is to be judged by the Medical Council, and not by the Courts. The Council clearly had jurisdiction to enter on the inquiry, and, having that jurisdiction, are "constituted by the Legislature the *sole* judges" as to whether the complaint is substantiated. Moreover, the Court could find no evidence of want of care or fairness in the inquiry. It would have been astounding if the Court of Appeal, after recognising this sole jurisdiction of the Council, had failed to find also that the publication of its Minutes and proceedings was privileged. This they took time to consider, and most effectually settled, on the recognised principle in similar cases, that the personal inconvenience of the publication of the proceedings of a body charged, like the Medical Council, with the duty of deciding questions of conduct is not to be set against the public advantage of such publication. The public have a right to know who are registered and who are not; and, in the case of erasure, to know the reasons for erasure.

We shall not make this case and the final decision on it more painful to Mr. ALLBUTT by dwelling on it and the agreement of this decision with common sense, and the good discipline of the profession, in which, more perhaps than in the case of any other profession, the public have such a deep interest. We can only express the confident hope that medical men in their professional conduct will

more and more have respect to the obvious if unwritten judgment of their own fellows, and that the Medical Council will with dignity and fairness hold higher and higher the standard of professional conduct, of which it is now pronounced to be in grave cases the sole judge.

THE Annual Report of the Agricultural Department of the Privy Council for 1888 has just been issued. It is one of great scientific interest, for it contains in the appendix numerous reports by Professor CROOKSHANK upon the subjects of Anthrax, Tuberculosis, and Actinomycosis, which will be sure to receive the full attention they merit. The Department is to be congratulated upon securing the assistance of so able and indefatigable a worker, and we are unfeignedly glad to find that the scientific investigations which he has been engaged on should have been admitted into these reports. A foretaste of this new departure in the work of the Agricultural Department was presented in the Report upon the Hendon Cow Disease issued last year; whilst the excellent and liberal manner in which these scientific memoirs have been produced reflects great credit upon the Government. Professor BROWN, in making his annual report, after a reference to the Hendon cow disease, which, he points out, stands alone among many similar epidemics in being charged with being the source of scarlet fever, refers in the first place to pleuro-pneumonia, and upholds the Slaughter Order of March, 1888, which was made with a view to check the ravages of this disease. This order could, however, only be carried out imperfectly, owing to the multiplicity of authorities who have to enforce it. The subject of tuberculosis is next dealt with. This is becoming of the greatest importance, and it is remarkable how much attention is being paid to it in all parts of the world. The possibilities of human infection from the consumption of the milk or flesh of tuberculous cattle are great; but apart from this consideration it would appear that bovine tuberculosis is on the increase. A committee specially appointed to consider whether any measures could be taken to check its ravages recommended that the disease should be included under the provisions of the Contagious Diseases (Animals) Act. But Professor BROWN points out how the uncertainties of its diagnosis, the liability to mistake other affections for it, and the question of compensation to owners of valuable beasts render such a course impracticable. Swine fever has received much attention from the Department during the past year, and here, as in many other animal diseases, it is clear that more than one class of affection is often comprised under a general term. Experiments were made with a view to ascertain the *materies morbi*, and to see if any method of protective inoculation could be available; but as yet no special micro-organism has been isolated. A marked decrease in outbreaks of anthrax in this country was observed in 1887; and, owing to the irregular manner in which these outbreaks arise, no steps could be taken to introduce the prophylactic measures of PASTEUR. The question of anthrax in swine formed the subject of a special investigation by Professor CROOKSHANK; it was decisive of the point that swine are liable to the disease. Respecting rabies, Professor BROWN points out that, of the 176 cases reported in the year, no fewer than 161 were observed in two areas of England—viz.: (1) an area comprised by Lancashire, Cheshire, Staffordshire, Derbyshire, and the West Riding of Yorkshire; and (2) the district occupied by the metropolis and its surrounding counties—Middlesex, Essex, Surrey, Sussex, and Kent. Professor BROWN remarks, "That the disease might have been extirpated in the two groups of counties to which it was confined is hardly a matter of doubt; but, without the alarm engendered by an extensive outbreak, no restriction on the movement of dogs can be maintained, and we shall doubtless continue to repeat the system of checking the affection and allowing it to spread again as soon as the excitement is allayed. A repetition of the repressive measure is likely to be required soon, as rabies is steadily spreading in the metropolis and its vicinity in the absence of any regulations."

Unquestionably, the main interest of this Blue-book centres in the exhaustive scientific reports which are to be found in the appendix; and a brief notice of these here will, we trust, lead our readers to their careful study. The first of Professor CROOKSHANK'S reports deals with anthrax in swine. It opens with a historical review of cases of the disease recorded at various times by veterinary surgeons, mostly under the head of "blood-poisoning," and the task he set himself was to determine whether such cases were really due to anthrax or to septic poisoning. He made numerous experiments with swine, producing anthrax in them by feeding them with anthrax offal, by employing injections of the blood of a bullock dying of the disease, by similar injection of the blood of the spleen of a guinea-pig inoculated with anthrax, and of pure cultivations of the anthrax bacillus. He succeeded in obtaining positive results, and also in inoculating guinea-pigs with anthrax bacillus derived from swine, thus proving what has hitherto been doubted, that these animals are susceptible of infection, although their susceptibility is not great. A fairly constant feature in the affection in swine is ulceration of the tonsils. One practical deduction is to enforce caution with regard to the consumption of uncooked pork or sausages. The next detailed report treats of tubercular mammitis in cows, with especial reference to the infectivity of milk. Several cases are described, and the presence of tubercular bacilli demonstrated in the diseased udders and the milk. Rabbits fed or inoculated with the latter became tubercular, whilst a positive result was obtained by the transmission of tuberculosis to a calf which had been inoculated with tuberculous sputum from the human subject. As a corollary to this, and of great importance in regard to the question of transmission to the human subject, Professor CROOKSHANK reviews the subject of the morphology of the tubercle bacillus, and demonstrates that although certain differences in size and aspect are to be observed between the bacilli of human tuberculosis and the disease in cattle, the horse, pig, fowl, and ostrich, yet these are hardly more than might be explained by variations in environment. Of especial value is his observation that the bacillus obtained from the milk of tuberculous cows closely resembles the human tubercle bacillus. We must confess that we have never been able to conceive that there exists any essential difference between human, bovine, and avian tuberculosis; and this report goes to

show that the transmission of the disease to man from these varied sources is at least possible. The remaining contributions made by Professor CROOKSHANK consist in four reports upon Actinomycosis. They cover the whole ground of this remarkable affection, and constitute the most extensive review of the subject that has appeared in our language. The first of them deals with Actinomycosis bovis in Great Britain, the next with the same disease in foreign countries, whilst the third and fourth treat in like manner of Actinomycosis hominis. Each section is introduced by a careful historical survey, from which we learn that cases recognisable now as examples of this disease have been observed and recorded in this country many years ago. In connexion with the present inquiry, Professor CROOKSHANK had the opportunity of investigating cases occurring from 1887-89 in Lincolnshire, Essex, Hertfordshire, Cambridgeshire, and Middlesex. He gives detailed descriptions of the fungus and the several varieties of the disease, drawing special attention to the infiltration of the tongue met with in some cases, often described as "cancer of the tongue." The illustrations are numerous and admirable, and greatly assist the perusal of the text. As regards Actinomycosis hominis in Great Britain, abstracts are given of the seven published cases; and a discussion upon the significance of the filamentous threads discovered by Dr. T. D. ACLAND, should be closely read, for it proves that these filaments are an essential part of the actinomyces, that they existed in all the English cases, and that the club-shaped processes or rays are rather organs connected with fructification than the result of involution or degeneration. It is proved to demonstration that the discrepant statements of different observers respecting the structure of the fungus have been due to the methods of staining employed; so that a distinct addition to knowledge of this interesting disease is certainly made. That the disease in man is identical with that in bovine animals is also proved; and examples of successful inoculations of the calf and the rabbit from man are given. Of much value, as giving completeness to the inquiry, are the reviews of the records of this disease published abroad.

The appendix also contains the reports of the Inspectors of the Department upon Diseases of Animals in Great Britain and Foreign Countries in 1888, the legislation of the year, and the usual statistical and other information. Enough, however, has been said here to indicate our sense of the importance of the scientific portion, which will now form, let us hope, a leading feature of each year's record of the Agricultural Department. It will, moreover, serve to show how much is to be gained, from the hygienic point of view, by a wider knowledge of comparative pathology.

THE recent contest at the Royal College of Surgeons for the office of Councillors has been waged under new and interesting circumstances, and its result must be accepted, for the present, as the deliberate and sustained opinion of the electorate—the Fellows of the College. Messrs. HEATH, HULKE, and HOWES have been successful, and have a free hand given to them to do or not to do, as they please, for the next eight years. Messrs. HEATH and HULKE have already served eight years on the Council, and all three of the elected candidates are also examiners in the College.

The Fellows of the College, speaking at this moment, have consented that the present state of collegiate disquietude shall continue, and a special emphasis applies to their verdict, because by the use of voting papers they may be assumed to have expressed their views more deliberately than they have ever previously done. There can be no doubt that the full force of the conservative element was brought to bear against the reforming section of the College, so that we are not surprised to find that Mr. HEATH, who heads the poll, secured 217 votes more than Mr. RIVINGTON, who stands at the top of the list of unsuccessful candidates, the respective numbers being 397 and 180. We note with much satisfaction that 600 Fellows voted. Of these, roughly speaking, nearly one-third represented the views of the advancing party—a minority whose opinion is entitled to respect, and ought to be adequately represented. The Royal College of Surgeons has the reputation of being one of the closest of corporations. It is no light task to upset usages which are traditional and instinctive, so the Association of Fellows of the College must accept the figures given above as significant, and as an incentive to further effort and energy. It is difficult to repress a smile when the "privileges" of the Fellows of the College are mentioned. They have the "privilege" of voting by paper at elections; beyond that, the Fellows of the College are really in this respect nobodies, and even their one privilege of voting annually at the College elections carries with it but the semblance of power, owing to the octennial period of office in the Council and the complete absence of power of supervision. Where is the privilege in tamely acquiescing in the uncontrolled and uncontrollable actions of the Council? No other educated body of men in corresponding positions submit, or would submit, to the indignities to which the Fellows are exposed in matters of government and of political procedure. The Council is elected by the Fellows; but has it ever called the Fellows into conference or consultation, or acknowledged the virtue of their votes? Have the Members of Council ever seriously contemplated such a reasonable submission to the expressed voice of the Fellows? Or will the Council ever initiate such a reform unless pressure of high power be brought to bear upon it—not only by outside associations, but also by the force of public opinion? If, then, the case of the Fellows be discouraging so far as any action on the part of the Council be concerned, how utterly hopeless must be the case of the Members, who constitute the great bulk and body of the surgical profession in Great Britain—Members who legitimately aim at having a voice in the management of their own College, and the right of supervising the expenditure of moneys levied from their own pockets. Yet the recognition of these two guiding principles of conduct on the part of the Council of the College towards its Members has been designated by some Fellows, with more force of language than delicacy of feeling, "a bastard reform." It is pitiable that those who delight in such epithets do not see the inconsistency of denying to the Members of the College the exercise of such powers as in the wider walks of life have conferred upon themselves the privileges of citizenship.

While fully recognising the force of the recent election, we do hope that the grievances so long complained of will be remedied by the Council; and that matters will not go

on at the College in the usual fashion. Otherwise it cannot be doubted that the irritation and friction between the governing class and the governed will increase, until discontent can be no longer kept in check, and then, if a compromise be effected, it will possibly be on less reasonable terms than those now offered by the Associations of Fellows and Members of the College.

Annotations.

"Ne quid nimis."

THE FUTURE POPULATION OF LONDON.

NOT content with the difficulty of estimating, at the distance of more than eight years from the last census, what is the present population of London, a daily contemporary stated a few days ago that "forty years hence the inhabitants will be twice as numerous as they are now—that is, London proper will contain nearly nine millions, and Greater London about eleven millions." It is assumed that because Registration London has nearly doubled its population in the past forty years the same rapid increase will be continued for another forty years. The estimated population of London in the middle of last year was equal to 57·3 persons per acre, and should this population double itself in the next forty years the density of the population would be 114·6 per acre, and rather less than the mean density of the population last year in the borough of Liverpool. There would therefore be nothing physically impossible in the housing of double the present population within the administrative area of the London County Council. Moreover, under stringently effective sanitary control it would probably be possible to maintain such a population in better sanitary condition than now prevails in many of our largest towns. It will, however, be well briefly to consider the probability of such an increase of the future population of Registration London as is assumed by our contemporary, the possibility of which may be admitted on the grounds mentioned above. Some constant relation between the rate of increase of population within any urban district having a fixed boundary, and its proportion of unoccupied building ground must be obvious; and it is therefore clear that as the proportion of this unoccupied building ground decreases, the rate of increase of population within such area must also decrease. Now Registration London has a fixed area of rather more than 120 square miles, a larger proportion of which has been year by year occupied by houses since the boundary was first fixed nearly half a century ago. At the time of the first census, in 1801, the population of this area was rather less than a million; and at the last census, in 1881, it had increased to nearly four millions, having practically twice doubled itself in eighty years. The question is, was the rate of increase an equal and steady rate of increase during the eighty years, and if so, can it be maintained? In the four intercensal periods since 1841 the rate of increase per cent. has been successively 21·2, 18·7, 16·1, and 17·2. Thus the rate of increase steadily declined during the thirty years 1841–71, and showed a slight recovery in the ten years 1871–81. The Registrar-General, in estimating the present population of London, assumes (in the absence of any actual information as to the rate of increase since 1881) that the rate of increase since the last census has been the same as it was in the last intercensal period. Bearing in mind the experience of the forty years 1841–81, we should rather expect to find that the rate of increase since 1881 has been smaller than it was in 1871–81, as the unoccupied land within the metropolitan area in 1881 was obviously considerably less than had been in 1871. Between 1871 and 1881 the population actually declined in ten of the registration districts of London, while in all but six of the remaining registration districts the rate of increase in 1871–81 was smaller than it had been in 1861–71. With such facts before us, we may set aside as distinctly improbable the assertion that the population of Registration London will double itself in the next forty years. If, however, we study the population statistics of what is known as Greater London, we shall find that the rate of increase of what may be called London over the border has recently far exceeded the rate within Registration London. That Greater London has been increasing at the expense of Inner London, as well as by immigration from the rest of England and Wales, is beyond question. Moreover, it may be noted that the rate of increase of Greater London was considerably greater in 1871–81 than in 1861–71, the increase of population in the outer ring being more than 50 per cent. in each of the last two intercensal periods. While, therefore, we regard it as in the highest degree improbable that the population of Inner London will in forty years amount to anything like nine millions, we feel confident that that of the outer ring will then very far exceed the two millions suggested by our contemporary, which figure will probably be reached before the end of this century.

THE HOLDING OF INQUESTS.

A CONTROVERSY has recently been carried on between Mr. R. W. O. Withers of Shrewsbury and Mr. R. E. Clarke, coroner, respecting an inquest held by the latter gentleman at Wynn's Cottages, Belle Vue. It appears that a gentleman named Mr. Humphrey James went to Shrewsbury for the purpose of consulting a physician, and that he placed himself under the care and treatment of Mr. Withers. It was found that he had "advanced tuberculosis of the lungs." Mr. James died suddenly, and on the morning after the death the coroner was informed by his own gardener that "Mr. James had fallen down dead in a passion." Upon the receipt of this information the coroner ordered his officer to call on Mr. Withers and tell him that he thought it was a case for inquiry. The coroner complains that Mr. Withers neither called on him nor wrote a letter to the effect that he had attended the deceased, and that he was perfectly satisfied as to the cause of death. At the inquest Mr. Withers was not called, but Mr. Bratton, another practitioner, was summoned to attend, and did so in obedience to his subpœna, although he demurred to doing so, and justifiably, as we think. According to Mr. Withers' letter to a local paper, he attended the inquest by order of the coroner. After the evidence had been given, he expressed a desire to state his opinion as to the cause of death, which was at variance with that of the coroner, or rather the coroner's interpretation of the evidence of the only witness who had been examined. Mr. Withers further says that the coroner asserted that he was willing to swear him, but that if his testimony varied from that of the previous witness he should adjourn the inquest and order a post-mortem examination to be made. It seems the coroner directed the jury that the evidence before them would warrant them in finding that the deceased succumbed to "heart disease." Mr. Withers contends that the deceased had no symptoms of organic disease of the heart, but that the fatal issue was due to pneumonia supervening on pulmonary tuberculosis. We have always held that, where the cause of death is at all doubtful, not only should an inquest be held, but a post-mortem examination should be made. In the above case, we are of opinion that had a mutual understanding, founded on good feeling, been arrived at, the coroner would have decided not to hold

an inquiry at all, for, according to the facts, there seems little doubt that the cause of death was syncope consequent on pneumonia in a phthisical patient. Mr. Withers no doubt was quite right in saying there was no *organic* disease of the heart, but this is consistent with the assumption that the proximate cause of death was "cardiac failure." The medical practitioner and the coroner seem to have been at cross purposes, hence the climax. If a coroner decides to hold an inquest, he does so solely on his own responsibility. He, of course, is answerable to authorities higher than himself; but we hold that after the medical man has given his information to the coroner directly, by word of mouth or in writing, or through the coroner's officer, he has discharged his duty. If we read the controversy aright, Mr. Withers felt aggrieved that the coroner should decide upon an official inquiry without first consulting him as to the necessity. A little more give-and-take than was evinced in this case would have eased the friction which led to so regrettable a blaze.

MOVABLE HEART.

OF five cases of movable heart studied by Professor Rumpf, three were the results of dietetic and medicinal attempts to cure obesity, one occurred after violent nervous excitement, and in one no cause could be assigned. The chief complaint of the patients was great debility and incapacity for work; other symptoms were pains in the chest, uneasiness, anxiety of mind, vertigo, asthma, and accelerated pulse. One symptom especially is always present in these cases: all the signs become less in the patient when lying on his back, and worse when he is on his side, and he feels better when he is standing up, though the pain does not disappear; occasionally, however, there is vertigo and malaise. The examination of the heart in the erect or horizontal position, and with the thorax bent forward, shows nothing whatever abnormal; when, however, the patient lies first on the left and then on the right side the abnormal mobility of the heart becomes very distinct. In one case the apex beat shifted 13 centimetres, in another from 4 to 5 centimetres. When the patient lies on his left side the area of the cardiac dulness seems larger, when on his right smaller, while at the same time the position of the aorta and of the pulmonary artery is also changed; in one case they moved 1 centimetre in the direction of the displaced heart. Dr. Rumpf considers the movable heart to be not a mere irregularity, but a pathological symptom, as the average normal movement of the heart is at most 2 centimetres to the left and 1½ centimetres to the right, and as he observed this dislocation in one case of tuberculosis of the lungs and in one case of muscular atrophy.

MILK AND ENTERIC FEVER AT LEEDS.

AN outbreak of enteric fever in Leeds has been provisionally traced to two farms whence milk is supplied to the families of those who have been attacked. The outbreak occurred mainly amongst the patients of one medical practitioner, who was first called in on June 27th, but it was not until July 1st that he had sufficient evidence as to the nature of the disease he had to deal with. He then suspected the milk-supply as a cause, and immediately communicated with the sanitary department for the borough. At that date he had twenty patients under treatment. The milk supply was not stopped until the evening of July 3rd, and by that time it was ascertained that the children at one of the dairy farms in question were suffering from enteric fever, and that there had been business relations in the matter of the supply of milk between this farm and the one which was suspected. So far no clear account is given as to the means by which the milk-supply became infective. On the one hand, sewage is reported to have made its way into a well; on the other, it is asserted that the so-called well is only a man-hole giving access to the apparatus of the pump, which is at some distance from the well. We shall look with interest to Dr. Goldie's report on the circumstances of the outbreak.

FATAL CASE OF POISONING BY ROBURITE.

FOLLOWING very closely the Report on Roburite as an Explosive, a summary of which appeared in our columns on June 1st, p. 1100, a case of poisoning has occurred at the Roburite Works, Gathurst, near Wigan. Last week Mr. Coroner Brighouse held an adjourned inquest on the body of John Waterworth, who had met with his death after cleaning out a flue over the mixing room at the works. The man it appears had to enter a flue thirty-five feet long and two feet wide, and clean it. After this he was found on the premises insensible, and was taken home in a cart. Mr. Molyneux of Upholland, saw the man and prescribed for him, but he never recovered consciousness, and died next day. The post-mortem examination showed marked paleness of the internal organs. The lungs were healthy, but the heart was enlarged. All the veins were full of clotted blood. The contents of the flue were said to be dinitrobenzine, which is a very soft, crystallisable substance. It transpired in evidence that the men had to clean this dangerous flue in turns, and that they were provided with a special suit of clothes and a respirator for the purpose. The men remained in the flue about three minutes at a time, and remained out for twenty minutes, re-entering again till the flue was cleansed, the whole work taking about five hours. The men were paid double wages for doing this dangerous work. We think most people will agree with the coroner, and also with the finding of the jury—namely, "that the work was exceedingly dangerous, and that the work ought to be done mechanically in the future." The coroner, in closing the proceedings, said that he was bound to say the Roburite Company had given every possible assistance to the police in making their inquiries.

OVERHEAD WIRES.

THE motion introduced in the House of Lords last Friday week by the Duke of Marlborough with reference to telephonic and electric lighting communications evoked, as was to be expected, a somewhat interesting discussion. The Duke, it will be remembered, complained of the great irregularity which characterises the distribution of wires, and the menace to public security implied in their passing overhead and their connexion with supports which are not always equal to the strain upon them during changes of weather. His proposal that a committee of both Houses should be appointed to report upon the rights and procedure of the companies interested in these enterprises, with a view to acquiring the control of their operations, met with a general though somewhat qualified approval. Whether such a course of action is now practicable or expedient is open to criticism, and in this regard we may note an instructive reminder by Lord Balfour that the business of electric lighting is carried on by voluntary effort, though subject to regulation by the Board of Trade, under whose directions wires and cables are being to a large extent dispensed with overhead, and made to travel underground. Whatever may be said about the actual duties of a committee, there is no doubt as to the nuisance created by these overhead communications. Public sense has from time to time been startled by the record of fatal injury inflicted by the snapping of wires or by unguarded contact during the passage of the electric

fluid. The case of the lighting companies above referred to suggests that underground communication is possible to a far greater extent than is generally supposed. Whether it will be universally adopted is still doubtful, though the precedents afforded by the experience of gas companies and of German telegraphy are in this respect most encouraging. If, as the Duke of Marlborough suggests, we need not look for so great a reformation in London for some time to come, if at all, some such amendments as he proposes would be useful in the meantime—namely, that wires should be made to follow the lines of streets, and to cross these only at stated points, and that the length of supports should be reduced, while their due stability should be guaranteed.

SCARLET FEVER IN PLYMOUTH.

THE recent remarkable decline in the rate of scarlet fever mortality, especially in our largest towns, invests with special interest any definite outbreak of this disease, and more particularly one in an urban population. Recent weekly returns of the Registrar-General point to such a definite outbreak recently in Plymouth. We may note, in the first place, that the annual death-rate per million from scarlet fever in the largest English towns, which was 890 in the four years 1870–73, fell to 292 in the last four years 1885–88. Plymouth has not suffered from scarlet fever since 1870 (prior to which the Registrar-General did not publish statistics for the large towns) to the same extent as most of the other large towns, and compares favourably in this respect with Portsmouth, which experienced so remarkable an epidemic in 1876. Till recently, moreover, the decline in the mortality from scarlet fever during the past nineteen years has been as strongly marked in Plymouth as in the other large towns; for the rate declined from 325 per million in the ten years 1870–79 to 97 in the nine years 1880–88. During the whole of last year only 7 deaths from scarlet fever were registered in Plymouth, and only 2 occurred in the first quarter of this year. The present outbreak may be said to have first declared itself in the week ending April 27th, when 6 fatal cases were registered. Since this date the fatality has continued, and during the second quarter of this year no fewer than 43 deaths from this disease were registered within the borough, 6 additional fatal cases being recorded in the first week of July, making 50 deaths from this disease since the beginning of the year. Thus, in the first half of this year more deaths from scarlet fever have been registered in Plymouth than in any year since 1870. There seems to be no legal notification of zymotic disease in Plymouth; and, although the borough possesses an isolation hospital, the Registrar-General's reports do not afford evidence that the hospital is largely used. Indeed, we believe that only one death has occurred therein during the present epidemic. Without notification, and without free use of a thoroughly efficient isolation hospital, the local sanitary authority will be seriously handicapped in their efforts to control the present epidemic of scarlet fever.

AMERICAN MEDICAL ASSOCIATION.

THE fortieth annual meeting of this Association was held at Newport, R.I., from June 25th to 28th, under the presidency of Dr. W. W. Dawson of Cincinnati, who delivered the annual address, which in part dealt with the subject of medical education in the United States. At the last census it was shown that nearly 4000 schools for higher learning existed in the United States, including nearly 400 ranking as colleges and universities. Last summer a university was founded in California, which, said Dr. Dawson, "will surpass, probably, any school upon the continent." He believed that the physicians of the future would be drawn from country schools rather than from those of the towns, and pointed with justifiable pride to the establishment of free schools and colleges in many of the States. He showed that medical education was making rapid strides, did not think the number of medical colleges superabundant, spoke of the laboratory work undertaken in many of them, and gave an outline of the rise of medical education in the country. He then referred to literature, and, after a few scathing remarks on "secret remedies," concluded an interesting address with a reference to legislation for the regulation of the practice of medicine. On the 26th Dr. William Pepper delivered an address upon General Medicine, taking the life and work of Benjamin Rush as his text; and on the 27th Dr. Phineas S. Conner gave the address on General Surgery, in which he dwelt largely upon the subject of cancer. Many interesting subjects were dealt with in the sectional meetings, and the gathering was a highly successful one.

EXAMINATION OF THE GASTRIC SECRETION.

DR. JÜRGENSEN of Copenhagen has published a contribution to the question discussed by Ewald of Berlin and Riegel of Breslau, as to whether it is better in the cases of disordered digestion to examine the contents of the stomach after breakfast or after dinner. His experiments on twenty-one patients after both meals showed that the difference of the results obtained is neither so clear nor so important as to enable one to conclude that either of the two meals is distinctly the better for experimental purposes. He prefers to conduct the examination after breakfast, but merely because it is more convenient both for physician and patient. Dr. Jürgensen's deductions from his own experiments have been criticised in a German medical journal, which holds that they point to more reliable results being given after dinner than after breakfast. He found in sixteen experiments in twelve cases of excessive acidity (three being cases of gastric ulcer) that the total acidity after dinner increased in fourteen cases, and decreased in only two, in both of which there was rather an excess of acidity after breakfast. In three cases there was absence of acidity and nervousness after breakfast, and total absence of acidity after dinner. In eight experiments in six cases of chronic gastritis the acidity was twice absent, three times decreased and twice very slightly increased after dinner, while after breakfast there was less than the normal acidity, and in one case there was absence of acidity after both meals. These experiments seem to prove that in nineteen cases dinner brought into prominence the morbid function of the stomach, while breakfast showed this result only four times.

THE EVIL WROUGHT BY WANT OF THOUGHT.

THERE are certain impedimenta as to the disposal of which the traveller by rail is liable sometimes to find himself in a dilemma. A special van accommodates his heavy luggage, and lighter parcels find a lodging in the network over his head. For such waste as odds and ends of refreshments there is no convenient corner. He does not care to litter the carriage. What will he do with them? Convenience at once suggests the window as a suitable outlet, and without further question the unneeded remnants find a home on some bank or cutting, and are quickly left behind. The proceeding is quite natural, and usually harmless enough. Sometimes, unfortunately, it is not; and this fact is sufficiently proved by the case of a platelayer, who was struck on the head and dangerously injured a few days ago by a bottle cast out of a passing train. It is not necessary to discuss the lesson obviously taught by this incident. Travellers will not fail to see that here a very simple act by an unknown hand became, through mere carelessness in the doer, a cause of grave illness, and even of possible death, to

one of his fellow-men. The intended purpose would have been equally served, and the risk avoided, had the thrower thought of carefully dropping—and even this is obviously to be deprecated—not hurling, his bottle at random from the window. Unhappily, he did not think.

LOCAL APPLICATION OF CHLOROFORM IN EPIDIDYMITIS.

DR. THEODOR CLEMENS of Frankfort, in an interesting paper communicated to the *Allgemeine Medicinische Central Zeitung*, describes the great benefit he has obtained in cases of epididymitis, both specific and non-specific, by means of chloroform locally applied. He regards as most unsatisfactory the treatment of the affection by other methods as compared with his own, which he has employed now for a great many years. It consists in laying some cotton wool saturated with chloroform and spirit at the bottom of a large glass vessel, into which the genitals are then put and packed round with dry cotton wool, the buttocks and thighs forming a cover, this application being continued for from fifteen to twenty-five minutes, and repeated two or three times a day. Pathologically, he considers venous congestion of the epididymis and the cord through retention of semen a predisposing cause of the disease. He also considers epididymitis as very likely to occur when gonorrhœa has been contracted in excessive venery. He mentions a case of treatment by chloroform thirty-six years ago, not of epididymitis, but of periodical "heat" occurring in the human subject. The man used to suffer periodically from a form of orchitis, during which the testes felt hot and swollen, and the plexus pampiniformis was full and turgescent like a varicocele. He was ordered the local application of chloroform three times a day, from fifteen to twenty-five minutes each time, but the first time he bore the chloroform for nearly thirty-five minutes, after which the pain of the severe attack completely ceased and the swelling considerably decreased. This treatment lasted three days, during which time he was able to walk about, the cotton wool which had been used for the chloroform being put into the suspensory bandage and the testes covered with it. After that both the swelling and sensibility disappeared. Another case is mentioned, where epididymitis had been caused by the continuous pressure of a rudder handle on the hypogastrium, in which similar treatment proved entirely successful. Again, a class of case that is usually very difficult to treat—viz., that of gonorrhœal orchitis—seems to have proved fairly tractable when managed with the help of chloroform. Here one of the first signs of improvement was frequently the re-establishment of an old discharge, which was soon cured simultaneously with the epididymitis.

MASSACHUSETTS MEDICAL SOCIETY.

THE 108th annual meeting of the Massachusetts Medical Society was held at Boston on June 11th and 12th. The first proceedings consisted in an organised system of visits to the various hospitals—viz., the Children's, the Massachusetts General, and the Boston City Hospital, where the members had the opportunity of seeing several important operations performed by members of the staff. In the Section of Surgery a discussion took place on the practice of antiseptic surgery (*Boston Medical and Surgical Journal*, No. 25). It was introduced in a paper by Drs. Greenleaf, R. Tucker, and H. L. Burrell, in which it was shown that to obtain absolute asepticity in reference to the operating rooms, instruments, hands, &c., was most difficult. They stated that instruments were best rendered aseptic by subjecting them for an hour to a temperature of 150° to 160° C., for they found germs on instruments which had soaked for an hour in a 1 in 40 carbolic solution. As to ligatures, small catgut and silk, as ordinarily prepared, were found to be sterile; large catgut, never. Amongst other points, it was noted that ordinary iodoform or boracic gauze was non-sterile. In the debate, Dr. Torrey of Beverly insisted on cleanliness rather than the use of chemical germicides; and he was followed by Dr. John Collins Warren of Boston, who also spoke of some of the dangers of antiseptics, instancing cases of poisoning from the use of antiseptics, such as carbolic acid, sublimate solutions, and iodoform; with respect to the last-named, he mentioned a case where, after operation for ruptured perineum, the application of a large amount of iodoform was followed by extensive dermatitis in the thigh, and a delirious condition lasting six or seven weeks. Many other surgeons took part in this instructive debate.

THE ABOLITION OF THE FACULTY OF MEDICINE!

IT is difficult nowadays to be astonished at anything which is said or proposed in Parliament. But one of the most remarkable proposals lately made is that of Sir George Campbell for the abolition of the Faculties of Medicine in the Scottish Universities. A greater injury to the Scotch Universities or a greater insult to the profession of medicine could not easily be imagined. It would be difficult to prove that of late years any Faculty has afforded such brilliant justification for its own existence as that of Medicine. If it is still lacking in scientific precision or in philosophical culture, that is a reason for making more of its academic recognition, and not less. Medicine would continue to flourish, even if the Scotch Universities refused to recognise it; but such refusal would be a bad day for the Universities of Scotland, and a deadly blow at their existence.

THE CAUSES OF INFANT MORTALITY.

THE experience which Dr. M'Grigor Maclagan has for many years past had, as medical officer of health to the Hexham Rural Authority in the Tyne district, has compelled him more than once to advert at length to the excessive mortality which still prevails in many portions of this country amongst children under one year of age. He does so again in his annual report for the past year, and he summarises some of the principal causes of this "massacre of the innocents," with especial reference to his district. The causes are, however, of much wider application. First come carelessness, ignorance, and superstition on the part of parents—causes which, though not altogether lacking amongst the upper and middle classes, operate mainly amongst the poorer classes, with whom the greatest infantile mortality obtains. Associated with these causes are insufficient and improper food, want of cleanliness, exposure to climatic changes, inadequate or improper clothing, and impure air. "Fashion," as opposed to "common sense," tells heavily against certain children who must be kept respectable by the exposure of their chests, shoulders, and lower limbs at all seasons of the year; and poverty tells much in the same direction as regards insufficiently clothed infants exposed to wind, cold, and rain. Perambulators come in for especial condemnation, and everyone who has watched their use must have noticed how they may be abused, and how at times the heads of children are exposed to the burning rays of the sun whilst the attendant nurses are gossiping. Then comes the influence of soothing mixtures, which almost always contain laudanum, and are hence most dangerous to infant life. And, lastly, the question of the insurance of infants' lives merits strong condemnation. Dr. Maclagan does not presume this practice to be more common in his district than in many other places, but he denounces it as a totally false one from every

point of view; and he declares that, quite apart from criminality, infant insurance leads to great carelessness in the rearing of little ones. If a Royal Commission should be appointed to discuss this question of infant mortality, there are few more fitted to give evidence on some of its aspects than Dr. Maclagan, who has made the subject a study during the fifteen years of his health officership in the Hexham district.

THE SHAH'S PHYSICIAN AND THE PRESIDENT OF THE COLLEGE OF PHYSICIANS.

AMONG the successful hospitalities connected with the visit of the Shah we must not omit to notice the brilliant reception accorded to Dr. Tholozan, Physician to the Shah of Persia, by Sir Andrew and Lady Clark, at their residence. To judge only from the easy abandonment to such duties which the President of the College of Physicians shows, one might infer that he is the least occupied man in London, instead of being one of its most hard-worked citizens. It is certainly no slight advantage to his College, and, we may add, to the profession at large, to have a President so generous in sentiment and hospitality. Dr. Tholozan seemed delighted with the reception accorded to him, and with much grace contrived to make all Sir Andrew Clark's guests feel that they had contributed to his pleasure.

THE COMMISSION ON VACCINATION.

ACCORDING to the London correspondent of the *Manchester Guardian*, Lord Herschell has taken "a broad and statesman-like view" of the scope of the reference to the Commission, and it is added that in this view he has been unanimously supported by his colleagues. We do not know to what this refers, but we are satisfied that the Commission will interpret in a reasonable manner the terms of the reference. It is further stated that a representative of the opponents of vaccination has been admitted to take shorthand notes of the proceedings of the Commission in the interests of his clients. If this be the case, it is a wide departure from the custom which has previously prevailed, and it will be interesting to see how far information obtained in this way can be utilised by the clients mentioned. We have observed the efforts made by anti-vaccinationists to discredit the report of the Commission, even before any evidence has been taken; after clamouring for years for an inquiry, as soon as their request is granted, they at once announce that the report of the Commission is not to be trusted. Everyone will, of course, put his own construction upon the course they have adopted.

ULCERATIVE STOMATITIS.

ACCORDING to Dr. Frühwald, ulcerative stomatitis begins on the external alveolar margin of the canines, appearing first as gingivitis catarrhalis. The gum becomes a pulpous mass, and salivation increases to an enormous extent, a very foul odour being produced. Gangrene of the soft parts and necrosis of the jaw-bones sometimes follow; glandular swellings are an ordinary symptom. Frühwald mentions the following predisposing causes of the disease: insufficient cleanliness of the oral cavity, naturally flabby gums, rachitis, scrofulosis, possibly climatic influences, certainly general affections, especially infectious diseases and scurvy, poisoning by lead, copper, mercury, and phosphorus. He recommends as treatment the application of iodoform or occasionally of nitrate of silver. He succeeded in cultivating from the discharge several kinds of micrococci and bacilli in gelatine and bouillon, and on potatoes, one of the species having a fetid odour. They are, according to Frühwald, undoubtedly pathogenic, producing fatal pleurisy and peritonitis in animals inoculated with them.

CONGRESS OF PHYSIOLOGICAL PSYCHOLOGY.

AMONG the numerous congresses that have commenced to assemble in Paris during this Exhibition year is one on "Physiological Psychology," which is to be held from Aug. 5th to the 10th. The president is Professor Charcot, and the general secretary Professor Charles Richet, 15, Rue de la Université, to whom all inquiries should be addressed. Amongst the English members of the committee, which includes representatives from every country on the Continent and from the United States, we observe the names of Professor Bain, Mr. F. Galton, Dr. Hughlings Jackson, and Dr. de Watteville. The subjects for discussion comprise—1. Muscular Sense. 2. Share taken by Movement in the Formation of Images. 3. Is Attention always determined by Affective States? 4. Statistics of Hallucinations. 5. The Appetites in Idiots and Imbeciles. 6. Are there among the Insane Motor Impulsions apart from Images and Ideas? 7. Psychical Poisons. 8. Heredity. 9. Hypnotism.

FREE ADMISSION TO ISOLATION HOSPITALS.

THE Town Council of Bury have taken a very wise step in passing a resolution to the effect that, notwithstanding any previous instruction to the contrary, admission into the sanitary hospital for the purposes of isolation is for the future to be free, and that all suffering from infectious diseases are to be urged to go into the hospital. It is essentially the early isolation of first attacks of infectious diseases that is called for in the interests of public health, and to make such isolation in an institution provided out of and maintained by the public rates, conditional on the payment of a sum of money, however small, is to impose one of the most potent barriers to the usefulness of the means that have been provided for the prevention of disease.

TREATMENT OF THE NASAL MUCOUS MEMBRANE IN WHOOPING-COUGH.

SEVERAL physicians, believing that the paroxysms of whooping-cough are to a greater or less extent due to reflexes from the nasal mucous membrane, have directed their attention to it with regard to treatment of the disease. Dr. Beltz, who has conducted a large number of observations on the treatment of whooping-cough in the Greifswald polyclinic, speaks especially highly of a plan first practised by Michael, which consists of employing nasal insufflations of a mixture of powdered nitrate of silver with magnesia in the proportion of 1 in 10. These insufflations are given at first once a day, and subsequently once in two or three days according to the frequency and severity of the attacks. He finds that the attacks are very decidedly lessened even after the first insufflation, and has come to the conclusion that this affords a more satisfactory method of treating whooping-cough than any other plan with which he is acquainted.

A CHEAP LIFE INSURANCE.

IT transpired at a recent meeting of the directors of the Society for the Relief of the Widows and Orphans of Medical Men, presided over by Sir James Paget, that one of the recipient widows has lately died. The history of her advantage from the Society was to this effect—that her husband was a member for five years, and died in 1849, subscribing ten guineas in all. She then came on the funds of the Society, and has, in the intervening years, received £1623 7*s.* 6*d.* Yet the apathy of the profession to these easily secured advantages is wonderful. At the same meeting it transpired that about 5000 copies of the Report have been distributed among medical men of the London postal district, and that only four answers have been received.

CHANGES IN THE ALKALINITY OF THE BLOOD.

DR. PEIPER of Greifswald has examined the blood of healthy persons and that of patients suffering from various pathological conditions for the purpose of discovering whether the alkalinity is affected, and, if so, in what manner in disease. First of all, he found that the alkalinity of human blood varies only within somewhat narrow limits. Amongst healthy individuals it is least in children and greatest in men, the amount in the blood of women being intermediate. During the process of digestion the alkalinity increases. It is considerably increased by severe vomiting. Muscular action and strychnine convulsions lessen it. It is also less than normal in leukæmia, diabetes mellitus, chronic articular rheumatism, and severe anæmia, but in chlorosis it is increased. In the cachexia of carcinoma, in grave derangement of the organic metabolism, in destructive liver diseases, and in uræmia, the alkalinity is usually lessened. Again, in pyrexial diseases there is almost always less alkali, the diminution appearing to depend not so much on the duration of the fever as on its intensity. It appears also that during the administration of chloroform some effect in the direction of lessening the alkalinity is produced.

ALLEGED DEATH FROM VACCINATION.

AN inquest was held last week at Leeds on the body of a child, aged six months, who had been vaccinated on March 26th. The account given in a local journal does not enable any opinion to be formed as to the precise nature of the disease from which the child died, but it is stated that the vaccination ran an unusual course, and that "blood poisoning" caused the child's death; the coroner, however, is reported to have said that syphilis was inoculated into the child, and the mother to have expressed the opinion that animal lymph from London was used. The case evidently needs inquiry by the Local Government Board, and no doubt it will be investigated.

PROGNOSIS OF CIRRHOSIS OF THE LIVER.

PROFESSOR SEMMOLA of Naples, in a clinical lecture on Cirrhosis published in "Il Progresso Medico," maintains that the prognosis of the disease depends entirely on the quantity of urea excreted during twenty-four hours, as he has proved to his own entire satisfaction in seven cases. He teaches that increase in the secretion allows a much more favourable prognosis than a decrease. The quantity of urea secreted corresponds, according to him, with the functional activity of the hepatic cells; so that the extent of nitrogenous metabolism is proportionate to the number of normally acting cells. For the treatment of the disease Professor Semmola recommends an exclusive milk diet, which must be systematically and regularly administered.

THE REGENT'S CANAL.

EVERY summer the condition of the Regent's Canal is matter for discussion in the St. Pancras vestry. This year the sanitary committee have received complaints from residents in the neighbourhood, and they have been supported by a medical man who had observed the disturbance of the deposit which came to the surface when the canal was dragged in search of the body of a boy who had been drowned. The sanitary inspector also reported that he had counted the bodies of ten animals floating on the surface, and that there was a large quantity of putrid filth and offensive refuse to be seen on the edges of the canal. Eventually it was resolved to serve the Canal Company with a notice under the Nuisances Removal Act.

CHLOROFORM.

WE have received a telegram from Surgeon-Major Lawrie to the effect that His Highness the Nizam of Hyderabad offers to place the sum of £1000 from his private purse at our disposal, that we may send one or two representatives of THE LANCET to Hyderabad to repeat the experiments made by the Hyderabad Chloroform Commission (*vide* THE LANCET, Feb. 23rd and March 2nd, 1889), and to make any others which we may suggest. We await further details of the offer, which we are informed will be sent by mail.

FOREIGN UNIVERSITY INTELLIGENCE.

Innsbrück.—For the chair of Anatomy which is about to become vacant by the transference of Professor Holl to Gratz, three names have been selected by the Professorial Senate. 1. Dr. Roux, Extraordinary Professor in Breslau. 2. Dr. Dalla Rosa, *privat-docent* in Vienna. 3. Dr. Hochstetter, *privat-docent* in Vienna.

Gratz.—Dr. Julius von Wagner of Vienna is to be invited to take Professor Krafft-Ebing's chair of Nervous and Mental Diseases.

THE report on the composition and quality of the metropolitan water-supply during the month of May by Messrs. Crookes, Odling, and Meymott Tidy, shows that of the 189 samples examined the whole were found to be clear, bright, and well filtered. The character of the metropolitan water-supply during the month of May did not present any noteworthy variation from that recorded now for several months past as being entirely satisfactory; what variation did present itself for notice was in the direction of an increased degree of uniformity of composition among the different samples examined, of an increased degree of freedom from organic matter, and of an increased degree of freedom from colour-tint. Dr. Frankland, in his analysis, states that, taking the average amount of organic impurity contained in a given volume of the Kent Company's water during the nine years ending Dec. 1876 as unity, the proportional amount contained in an equal volume of water supplied by each of the metropolitan water companies and by the Tottenham Local Board of Health was:—Kent 0·8, Tottenham 1·1, Colne Valley 1·5, New River 2·0, Southwark and East London 2·2, Lambeth 2·3, West Middlesex and Grand Junction 2·4, and Chelsea 2·8.

THE Medical Faculty of the University of Munich has just awarded its prize for the best "Untersuchungen über die Wirkungen der verschiedenen Hefe-Arten welche bei der Bereitung weingeistlicher Getränke vorkommen auf den thierischen und menschlichen Organismus" (Investigations on the Effects of the various kinds of Lees occurring in the Preparation of Alcoholic Beverages on the Organism, Animal and Human). The successful candidate was Hans Neumayer, of the Medical School, whose essay more than satisfied all the requirements of the competition. For 1889–90 the subject of the prize will be "Lässt sich eine Keratitis interstitialis experimentell erzengen und wie verhält sich dieselbe?" (Can a Keratitis interstitialis be produced experimentally, and what are the circumstances of the same?)

AT a recent meeting of the Accademia Medica di Roma was formed the "nucleo fondatore" (the foundation nucleus) of a Society of Hygiene and Public Health. The leading members of the Academy have thrown themselves with energy into the project, which it is expected will soon culminate in an institution to be organised as a section of the Academy itself.

THE Bill brought into the House of Commons to enable the County Council to purchase by agreement the rights of the London water companies has been printed. It authorises the Council to borrow the money required by creating fresh stock, under the Metropolitan Board of Works (Loans) Acts, 1869 to 1875, redeemable within sixty years. After payment of the expenses and dividends on the stock, the profits are to be applied in reducing the charge to the consumers of water, or, on the vote of the Council in any year, in reducing the metropolitan consolidated rate.

H.R.H. DUKE CHARLES, M.D., of Bavaria, continues in the Bavarian Tyrol the philanthropic practice of ophthalmic surgery, to which he devotes the spring months in the Austrian Tyrol. On the 3rd inst., at the Tegern See, he performed with complete success his one-thousandth operation for cataract. For the occasion, which was a festive one, the surgical theatre was decorated with flowers by the sisters of the hospital, of which his Royal Highness is the patron and working president.

BOLOGNA, following the initative of Milan, opened on June 30th an Instituto Anti-rabbico, or institution for the treatment of rabies on the Pasteur method. The King, the Prime Minister and the various civic and scientific bodies, as well as the townsfolk of Bologna, contributed the requisite funds. Every considerable Italian city will soon, it is anticipated, be provided with an institution of the kind.

THE Royal Commission on Vaccination held its third sitting on Wednesday, the 10th inst. There was a full attendance of Commissioners. Dr. Ogle, of the General Register Office, was further examined, and Dr. R. Thorne Thorne, assistant medical officer to the Local Government Board, also gave evidence.

IT is stated that the four new members of the Scotch Universities Commission who will be nominated on report of the Universities Bill will be—Dr. J. G. Blackie, Sir Henry Thompson, Dr. Heron Watson, and Professor Culverwood.

DR. PAVY, whose term of office as Physician at Guy's Hospital has expired, has been invited by the governors and staff to hold the appointment for another year. Dr L. E. Shaw succeeds the late Dr. Wooldridge as assistant physician.

THE FORTY-THIRD ANNUAL REPORT OF THE COMMISSIONERS IN LUNACY.

THE Report of the Lunacy Commission for the year 1888 shows that the growth of the population under the charge of the Commissioners continues to exhibit that unwelcome expansion with which the reports of several years past have made us familiar. The increase last year was fractionally less than in 1887, but still it was substantial, and it is sufficiently disappointing to find that from year to year the number of patients who come for treatment into our various asylums and hospitals for the mentally afflicted shows a steady augmentation. To some extent, however, the figures for 1888 are unduly aggravated in this respect, for they include among the pauper lunatics some sixty patients who have been transferred from the hospital wards of the Woking Prison to the Broadmoor Asylum, and have thus been brought within the jurisdiction of the Commissioners, not by access of their malady, which had attacked them before, but by virtue of their translation to a new locality. In the case of private and pauper patients one would gladly accept the view of the Commissioners who explain that an increased number of persons, not quite sane, have sought and obtained admission into registered hospitals as voluntary boarders. It is not clear, however, that the Commissioners themselves regard this very satisfactory source of increase in the number of inmates as fully commensurate to the falling off which must be attributed to the natural reluctance of medical men to certify in a case where the symptoms of insanity are such as, though perhaps sufficient to justify a strong opinion on the part of a personal observer, are not very capable of demonstration in the witness-box after an interval of time. The very formidable facility with which it has within the past few years been shown that actions can be brought and verdicts recovered against medical men who have certified to insanity has necessarily had a marked effect upon the feelings and practice in relation to this matter of medical men, and it may well be doubted if upon the whole the effect has been salutary. It is undeniably a matter of prime importance that in any transaction in which personal liberty is so nearly involved, the utmost care should be observed by those responsible for the conduct of the proceedings; but it is, upon the other hand, a grievous public disadvantage that a serious obstacle should be thrown in the way of the most efficient treatment of slight and incipient mental disorder. This is a truth which the persistent growth of the lunacy figures is eminently calculated to bring home to the public mind. The actual figures of the increase for 1888 are as follows:—Private patients, 175; pauper patients, 1461; and criminal patients, 61, the last being subject to the explanation given above.

The broad results of treatment as brought out by this report are much the same as heretofore, the proportion being fractionally better than last year, but still fractionally below the average of the decade. With the methods of treatment adopted and the accommodation provided the Commissioners do not, upon the whole, find very much fault. In some instances, however, their criticisms are severe, and apparently not without reason. The following passages, for example, ought assuredly to receive the careful attention of the authorities in charge of the asylum in question:—

"The report of the Commissioners ..... showing that at the date of their visit nothing had been done towards improving the water-supply, so long a subject of unfavourable comment by them, led to a letter being written by our direction on Aug. 1st, 1888, to the Committee of Visitors, urging them strongly to remedy the existing defect either by sinking a new well, as recommended by Mr. Rogers Field in 1886, or in some other equally efficacious manner. The answer received, however, dated Aug. 16th, 1888, only informed us that the visitors still had the question under consideration, and, having heard nothing subsequently, we were forced to the conclusion that the thoroughly unsatisfactory sanitary condition of this asylum in regard to its water-supply, pointed out by us, remains unremedied. Experience shows that delay in these cases is very dangerous, and often attended with fatal results."

Happily, the case is exceptional, and indeed, so far as the present report shows, unique. We should hope that the above observations will lead to the solution of what is at best a very serious question between the Commissioners and the Visiting Committee.

PROPOSED CHAIR OF PHYSIOLOGY FOR DUNDEE UNIVERSITY COLLEGE.—At a meeting of the College Council held last week, it was announced that Mr. John Bett, a merchant of Rohallion, had offered one-third of the amount required to found and establish a chair of Physiology in connexion with the Medical School of the College, provided the remaining two-thirds required be raised. It is estimated that the total sum necessary for the endowment of the chair and the furnishing of suitable buildings will be about £15,000. The foundation of this chair would enable the College to complete the first two years of a medical curriculum. A vote of thanks was accorded to Mr. Bett for his liberal offer.

WEST LONDON MEDICAL AND CHIRURGICAL SOCIETY. The seventh annual dinner of this Society was held on June 14th, in the Grosvenor Gallery, Dr. Travers, the President of the Society, being in the chair. There was a large and distinguished attendance. The entertainment comprised some excellent music—part songs, quartets, and solos being interspersed between the toasts.

METROPOLITAN HOSPITAL SUNDAY FUND, 1889.

WE continue our returns of the larger sums collected at various Metropolitan places of worship in aid of the Hospital Sunday Fund. The total to date is considerably over £36,000, or more than £1000 in excess of the sum forwarded to the Mansion House at the corresponding date last year. A new and gratifying feature this year is the fact that, thanks to the efforts of Messrs. Alfred L. Cohen and E. Kennedy, a sum of £367 16*s.* was collected on the Stock Exchange, each member of which had previously received an abstract of THE LANCET Supplement, showing the good work done by the Metropolitan Hospitals during the past year.

		1888.		1889.	
		£ s. d.		£ s. d.	
Church of England.					
St. Peter's Parish Church, Eaton-square	Rev. J. Storrs	491 1 1	.....	771 17 2	
Ditto Chapel	Ditto	14 8 11	.....	7 1 6	
St. John the Evangelist, Wilton-road	Ditto	94 1 6	.....	78 11 4	
	Total	599 11 6	.....	857 10 0	
St. Mary Abbots Parish Church, Kensington	Hon. and Rev. E. Carr Glyn	402 6 6	.....	325 13 11	
St. Paul, Vicarage Gardens, ,,	Ditto	Rebuilding	.....	100 7 9	
Christ Church, Victoria-road, ,,	Ditto	74 16 0	.....	79 16 11	
Vicarage Parish Room, ,,	Ditto	20 16 0	.....		
	Total	497 18 6	.....	505 18 7	
St. Paul, Onslow-square, Kensington	Rev. H. W. Webb Peploe	341 15 3	.....	349 2 6	
St. Peter, Cranley Gardens, Kensington	Hon. and Rev. F. E. C. Byng	249 14 11	.....	218 17 6	
St. Matthew, Bayswater	Rev. J. Filmer Sullivan	189 17 9	.....	216 2 4	
Christ Church, Mayfair	Rev. H. Rowsell	125 16 8	.....	133 8 11	
St. James, Westmoreland-place, Marylebone	Rev. H. R. Haweis	68 10 3	.....	78 12 5	
St. John, Clapham-rise	Rev. C. H. Coryndon Baker, D.D.	77 12 9	.....	75 18 0	
St. James, Norlands, Kensington	Rev. A. Williamson	66 0 0	.....	74 3 2	
West Hackney Parish Church	Rev. H. B. Ottley	61 16 11	.....	62 14 5	
St. Paul, Herne-hill	Rev. S. F. Bridge	44 3 8	.....	54 3 3	
St. Saviour, Fitzroy-square	Rev. T. Turner	54 3 6	.....	53 0 0	
St. Mary and Mission, Hornsey-rise	Rev. W. S. Lewis	30 0 0	.....	43 4 3	
St. Stephen, Clapham Park			.....	41 12 3	
Emmanuel Church, Maida-hill	Rev. J. S. Tanner	43 13 9	.....	40 13 6	
Epsom Parish Church, Surrey	Rev. John Samuel	31 15 8	.....	36 9 2	
St. Stephen, Lewisham	Rev. R. Rhodes Bristow	39 11 10	.....	36 0 6	
St. Paul, Finchley	Rev. S. B. Mayall	36 0 6	.....	35 7 9	
St. Peter, Eltham-road, Kent	Rev. R. J. Simpson	40 0 1	.....	34 2 7	
St. Nicholas Parish Church, Chiswick	Rev. L. W. T. Dale	31 10 10	.....	34 0 1	
St. Saviour, South Hampstead	Rev. G. A. Herklots	24 10 6	.....	30 11 5	
St. John's Chapel, Downshire-hill, Hampstead	Rev. Gilbert Karney	52 15 0	.....	29 8 9	
St. Andrew, Stoke Newington	Rev. H. E. J. Bevan	26 0 0	.....	26 4 5	
St. George, Catford			.....	25 18 10	
St. John the Baptist, Kingston Vale	Rev. C. P. Sanderson	30 12 11	.....	24 2 3	
St. Mary's Parish Church, Newington, Surrey	Rev. G. T. Palmer	31 12 6	.....	21 14 5	
Christ Church and St. Barnabas, North Finchley	Rev. H. Stephens	15 1 1	.....	20 4 7	
St. Simon, West Kensington	Rev. R. Handcock	13 3 6	.....	20 0 0	
Later Returns.					
St. Michael and All Angels, Paddington	Rev. G. F. Prescott	198 11 5	.....	180 6 10	
St. Augustine, Queen's Gate, South Kensington	Rev. R. R. Chope	131 6 6	.....	128 5 10	
St. Mary and St. John, Balham	Rev. T. Bates	98 16 3	.....	92 6 8	
St. James, Clapham Park	Rev. F. A. C. Lillington	77 0 1	.....	66 5 4	
St. Margaret Parish Church, Lee, Kent	Rev. F. H. Law	78 7 10	.....	57 1 5	
Christ Church, Streatham-hill	Rev. Woodhouse Raven	50 3 3	.....	55 15 3	
All Saints, Blenheim-grove, Camberwell	Rev. T. J. Gaster	31 2 8	.....	47 16 4	
All Saints, Kensington Park	Rev. Canon W. R. Trench	44 4 3	.....	41 13 5	
All Hallows, London Wall, E.C.	Rev. C. Lacy	6 5 0	.....	35 4 6	
Baptist.					
Heath-street Chapel, Hampstead	Rev. W. Brock	50 0 0	.....	51 9 6	
Congregational or Independent.					
Streatham-hill Church	Rev. J. P. Gledstone	35 8 1	.....	40 0 0	
Upper Clapton Church	Rev. J. Hadfield	21 1 9	.....	27 0 0	
Jews.					
West London Synagogue of British Jews, Upper Berkeley-street	Rev. Professor Marks	222 3 0	.....	226 13 6	
Presbyterian.					
Islington Church, Colebrooke-row	Rev. J. T. Davidson, D.D.	40 0 0	.....	32 0 0	
Episcopal.					
Eaton Episcopal Chapel			.....	100 0 0	
Catholic Apostolic.					
Harrow-road Church	Mr. J. H. Maynard	20 6 11	.....	23 8 10	

Donations.

	£ s. d.		£ s. d.
Collected by Alfred L. Cohen, Esq., and E. Kennedy, Esq., on the Stock Exchange	367 16 0	"W." (a further donation)	50 0 0

MEDICAL TRIALS.

ALLBUTT *v.* THE GENERAL COUNCIL OF MEDICAL EDUCATION.

SUPREME COURT OF JUDICATURE, SATURDAY, JULY 6TH.

IN the Court of Appeal, before Lord Justice Lopes and Lord Justice Lindley, judgment was given in this case, which raised a question of great importance to the medical profession and the public, and a still larger and more important question as to the privilege of the press in general as to matters in their nature of public interest, even though affecting personal character. The particular question raised was whether, if a medical man has been struck off the Register of medical men by the Council for a certain cause, and they publish the fact and the cause, he is entitled to have their decision reconsidered and reviewed by the Court on an application for a *mandamus* to restore him or to maintain an action for libel against them for the publication. This Court, it will be seen, following a decision of Mr. Baron Pollock, has held that he is not so entitled, and they have so held upon principles which admit of a very wide and general application to proceedings of all public bodies in matters of public interest. Mr. Baron Pollock had held on the trial that the action could not be maintained, either by way of *mandamus* to restore or action for damages for libel. The case was argued before Lord Coleridge and the two Lords Justices, who took time to consider their judgment, which was now delivered (by Lord Justice Lopes) in favour of the Council, thus upholding the decision of Mr. Baron Pollock.

Lord Justice Lopes delivered judgment in these terms:—The plaintiff complains that the defendants (the General Council of Medical Education and Registration of the United Kingdom) have wrongfully and unlawfully erased his name from the Medical Register, and asks for a *mandamus* commanding the defendants to restore his name on the Register. The plaintiff also complains that the defendants have libelled him by printing and publishing of him in a book, entitled "Minutes of the General Medical Council," that his name had been erased from the Medical Registry, page 317, and that in the opinion of the Council the plaintiff had committed the offence charged against him—that is to say, of having published and publicly caused to be sold a work entitled "The Wife's Handbook" in London and elsewhere, and at so low a price as to bring the work within the reach of both sexes, to the detriment of public morals, and that the offence was, in the opinion of the Council, infamous conduct in a professional respect. With regard to the erasure of the plaintiff's name, the plaintiff says the defendants acted without jurisdiction, that there was no evidence of any infamous conduct in a professional respect, and therefore nothing upon which to found their jurisdiction. The defendants say, on the other hand, they lawfully, and in the exercise of a jurisdiction conferred upon them by Act of Parliament, struck the plaintiff's name off the Register, and that, as there was jurisdiction to enter upon this inquiry, they (the Medical Council) are the sole judges of what was done during the inquiry which they had jurisdiction to initiate. The learned Judge thought there was no evidence of any of the complaints, which he ought to leave to the jury, and gave judgment for the defendants. The section upon which the Council have acted in erasing the plaintiff's name is the 29th Section of 21 and 22 Vict., chap. 90, which says:—"If any registered medical practitioner shall be convicted in England or Ireland of any felony or misdemeanour, or in Scotland of any crime or offence, or shall after due inquiry be judged by the General Council to have been guilty of infamous conduct in any professional respect, the General Council may, if they see fit, direct the Registrar to erase the name of such medical practitioner from the Register." Having regard to the nature of the complaint, the Council clearly had jurisdiction to enter upon the inquiry, and, having that jurisdiction, are constituted by the Legislature the sole judges whether that complaint was substantiated. To use the words of Chief Justice Cockburn in "*Ex parte* La Mert" (33 L.J., Q.B. 70), "This Court has no more power to review their decision than they would have of determining whether the facts had justified a conviction for felony or misdemeanour under the first branch of the section." It is said by the plaintiff that there was no "due inquiry," and that that question ought to have been left to the jury. We think that there was no evidence of any absence of a due inquiry which ought to have been left to the jury. All charges of *mala fides* were withdrawn, and it was admitted the Council acted honestly and without any improper feeling or motive towards the plaintiff. We can find nothing irregular in the proceedings of the Council; the plaintiff had every opportunity afforded to him of bringing his case before the Council, who heard his counsel and his evidence and adjudicated thereon. With regard to the alleged libel, questions of greater difficulty arise and questions of grave importance. The defence of the Council is that they published what is complained of *bonâ fide* and without malice and in circumstances which constituted the same privileges. The libel complained of is published in a book containing the minutes of the General Medical Council, and is part of the report of the proceedings of the Council in the plaintiff's case. It is most material to bear in mind that it is admitted that the report is truthful, accurate, and honest, published *bonâ fide*, without malice, not an *ex parte* report, but a report of facts which have been finally ascertained and adjudicated upon. To determine whether such a report is privileged, it is important to consider the position, powers, and duties of the Medical Council. The Council is not a private association. They are a public corporation, invested with large powers and privileges and charged with important duties—duties in which not only the profession but the public at large are interested. They are authorised to hold quasi-judicial inquiries—inquiries involving the status and character of professional persons, members of their own body, involving the rights of those persons towards the public and the rights of the public towards them. There is no appeal from their decision, and the influence of public opinion is no small safeguard against the abuse of the powers intrusted to them. This influence cannot be exercised if they keep secret the grounds on which they act. The public are clearly interested in knowing these grounds. The preamble of the Act states that it is expedient that persons requiring medical aid should be enabled to distinguish qualified from unqualified practitioners. The Council, by Section 10, has power to appoint registrars, who are to keep correct registers, and in every year to cause to be printed, published, and sold, a correct Register, a copy of which is made evidence in all courts. Subsections 28 and 29 give the Council power to erase names from the Register. Subsections 31 and 32 deal with the privileges of registered persons, enabling those registered to sue and disentitling those not registered from suing for their charges. By Section 34 a "legally qualified medical practitioner" is to be construed to mean a person registered under the Act. Section 35 exempts registered persons from serving on juries. By section 36 unregistered persons are disqualified from holding a large number of appointments. Section 37 declares that no certificate required from any medical practitioner shall be valid if the person signing it is not registered. These provisions show how important it is that not only the profession but the public should have accurate information as to the proceedings of the Council, should know who is on the Register, who is entitled to sue for charges, who is exempted from serving on juries, who is entitled to hold those public appointments for which medical men are eligible, and who can sign valid certificates. Again, it is important that if a person's name is erased that accurate information should be given to the public of the cause of its erasure. The medical man whose name is erased is not disqualified from practising, and old patients and other medical men invited to meet him in consultation might reasonably desire to know the nature of the offence in respect to which the erasure was made, in order to determine whether they would still continue to employ or meet him. This they could not learn from the Register itself, but could learn from the proceedings of the Council as appearing in the book containing the report complained of. We are of opinion that the Medical Council would in many cases fail in discharging their social and moral duties to the public if they shrunk from the responsibility of making known to the public the grounds on which they have removed a man's name from the Register, and thereby converted him from a qualified into an unqualified practitioner. Can it be said that a fair, honest, and accurate report of such proceedings is not privileged? If this had been an impartial and accurate report of a proceeding in a public court of law it would have been be-

yond all doubt privileged. The reason of this privilege is thus stated by Justice Lawrence in "R. *v.* Wright" (8 T.R., 298):—"The general advantage to the country in having these proceedings made public more than counterbalances the inconvenience to private persons whose conduct may be the subject of such proceedings." Chief Justice Cockburn uses language almost identical in "Watson *v.* Walter" (L.R. 4, Q.B. 87), and Mr. Justice Willes, in "Henwood *v.* Harrison" (L.R. 7, C.P. 602-622) says:—"The principle upon which these cases are founded is a universal one, that the public convenience is to be preferred to private interests, and that communications which the interests of society require to be unfettered may freely be made by persons acting honestly without actual malice, notwithstanding that they involve relevant comments condemnatory of individuals." It seems to us, having regard to the nature of the tribunal, the character of the report, the interests of the public in the proceedings of the Council, and the duty of the Council towards the public, that this report stands on principle in the same position as a judicial report. It would be stating the rule too broadly, in my opinion, if it was held that to justify the publication of proceedings such as these the proceedings must be directly judicial or had in a court of justice. I can find the law nowhere so broadly stated, nor do I think in these days it would be so laid down. The courts must adapt the law to the necessary condition of society, and must from time to time apply as best it can what it thinks is the good sense of rules which exist to cases which have not been positively decided to come within them. We have said that we can find no direct authority against holding this publication privileged. We do find, however, authorities which, in our opinion, favour the contention of the defendants, that the rule of privilege extends to proceedings such as these. "Purcell *v.* Sowler and others" (2 C.P.D., 215) was a case decided by the Appeal Court in 1877. It was held that the administration of the Poor-law, both by the Government department and by the Local authorities, including the conduct of the medical officers, is a matter of public interest, but that the publication of a report of proceedings at a meeting of Poor-law guardians, at which *ex parte* charges of misconduct against the medical officer of the union were made, is not privileged by the occasion. The proceedings in this case were before a board of guardians, and were clearly not judicial. They were, however, *ex parte*, and on that ground only were held not privileged. Chief Justice Cockburn, after stating that proceedings in courts of law and proceedings in Parliament are privileged, although statements may have been made prejudicially affecting the character of private individuals, proceeds thus: "Many intermediate cases may be put. Take the meetings of the Corporation of London. The discussion at such meetings might involve strong observations upon the conduct of particular individuals. So also as to the municipal councils of other cities and boroughs; so again as to meetings of magistrates at quarter sessions, not as courts of justice, but for transacting the business of their county. In all these cases I should be sorry to lay down as law that the proceedings of such meetings may not be fully reported, although the character of private individuals may be inadvertently attacked. But it is unnecessary for the decision of the present case to lay down any such rule, and I wish to be understood as by no means saying that the proceedings of different bodies, to whom part of the administration of the public business of the country is committed, could not be matter for general discussion and publication." In the same case Lord Justice Mellish says: "I do not mean to say that the matter was not of such public interest as that comments would not be privileged if the facts had been ascertained." And Lord Justice Bramwell says: "If this had been a discussion on the plaintiff's conduct, the facts not being in controversy, the matter was a subject of such general public interest as would have given a right to comment upon it, and fair and *bonâ-fide* comments would have been justified." This case, to my mind, goes far to show that proceedings such as these, where the facts are ascertained and finally adjudicated upon, are privileged. "Cox *v.* Feeney" (4 F. and F., 13), decided in 1863, was a *nisi prius* decision, and Chief Justice Cockburn spoke with approval of the *dictum* of Chief Justice Tenterden—viz., that "a man has a right to publish, for the purpose of giving the public information, that which it is proper for the public to know"; and told the jury that the publication of a matter of a public nature, and of public interest, and for public information, was privileged, provided it was published with the honest desire to afford the public information, and with no sinister motive. The present case is stronger. The report is a report of proceedings which actually took place, proceedings within the jurisdiction of the Council, a report of proceedings where the facts had been ascertained, a *bonâ-fide* true report without any sinister motive, a report of a matter of a public nature, a report of proceedings in which the public are interested, and in respect to which they are entitled to information. New and important bodies were from time to time constituted by the Legislature, such, for instance, as the London County Council and other county councils throughout the country, bodies to whom the most important duties are intrusted, duties in which the community at large are interested. Is it to be said that a *bonâ-fide* honest and accurate report of the proceedings of these bodies is not privileged, because in the course of the proceedings the character or conduct of individuals is impugned? Such a result would be most mischievous; it would impede the free action of these bodies and deprive the public of information to which, in our opinion, they are entitled. If the report had simply been a report of the fact that the plaintiff's name had been erased, we cannot think it would have been contended that the report was not privileged. It is said, because the nature of the offence is stated, the privilege is lost. In our opinion the Council were fully justified in stating the cause of the erasure. If it had not been stated the plaintiff might have complained that the public were left to infer that he had been convicted of felony or misdemeanour under the earlier part of Section 29. It might have been said it was unfair to publish part of the proceedings only. Again, if they have published too much, this would not destroy the privilege; it might be evidence of express malice, but it is admitted there was no such malice. It is also said that the privilege is lost because there has been a publication to the public at large, to a class beyond those interested in the matter; but this I have disposed of, because, in our opinion, the public at large were interested in these proceedings, and their publication was information to which the public were entitled. There is an American decision—Burrows *v.* Bell (2 Gray's Massachusetts Reports) very similar to the present case, where it was held that the publication by a member of the Massachusetts Medical Society of a true account of the proceedings of that Society in the expulsion of another member for a cause within its jurisdiction was privileged. The decision is instructive, and is entirely in accordance with the views we have expressed. In "Whiteley *v.* Adams" (18 C.B., N.S., 398), Chief Justice Erle said: "Judges who have had from time to time to deal with questions as to whether the occasion justified the speaking or the writing of defamatory matter have all felt great difficulty in defining what kind of social or moral difficulty, or what amount of interest, will afford a justification, but all are clear that it is a question for the Judge to decide." This action is, in truth, an attempt to have the decision of the Council reviewed by another tribunal. We express no opinion on that decision. It cannot be reviewed directly, and this attempt to review it indirectly cannot succeed. We have come to the conclusion that the publication of these proceedings, being true, accurate, and *bonâ fide*, are privileged, and that the learned Judge was right in holding that there was no question which he ought to leave to the jury, and in giving judgment for the defendants. The appeal must be dismissed with costs.—*The Times.*

THE PARIS UNIVERSAL EXHIBITION.

(FROM OUR SPECIAL CORRESPONDENT.)

Pharmaceutical Products, Carpets, and Wall-papers of the English Section.—The International Congress on the Intervention of the State in Labour Contracts.

THE English Section, it must be frankly acknowledged, is barely a credit to the English nation. It is the largest section of the Exhibition, and it contains many remarkable exhibits, but its decorations are exceedingly poor. Its approaches are absolutely unimpressive; there is no effort at collective decoration. It is true that round about near the ceiling there are the names of various English towns written up, but this is done with less effect than even the names of the stations on the Metropolitan Railway. To

appreciate the English Section a general glance round does not suffice. This would send the visitor away with a very poor impression. A careful and detailed examination alone will save the reputation of England from the cold and bare nature of the walls that surround the British Section. Of course, it may be said that there are at least half-a-dozen British sections, and this is true enough, but I am now alluding to the principal or industrial section, which is situated in the main building, just beyond the Fine Arts Gallery. Entering this section, the visitor will at once come upon a display of English ceramic arts and glass ware. Among the latter are Messrs. Rose and Dobson's new hardened glass (J. T. H. Richardson's patent). On this glass any variety of design may be engraved or etched. The exhibitor invites the visitor to dash a delicate wine-glass on the ground, and it does not break. Then he is shown a list of the principal lines of steam-ship companies which are provided with this glass, and are consequently able to brave the storm and the squall without serious loss of crockery. It would be useful if medicine bottles, test-tubes, and other glass utensils used for medical and chemical purposes could be equally hardened, and thus many a laboratory or dispensing accident prevented.

Having once passed the land of glass and pottery, there is little to arrest the eye in search of decorative arts till the stall of Messrs. Burroughs, Wellcome, and Co. is reached. This is a splendid Indian case, formerly a screen at the Indian and Colonial Exhibition, richly inlaid with ivory and beautifully carved. Some eminent French artists have declared that it is the handsomest case in the English Section—a circumstance which cannot be considered otherwise than fortunate, for the case deserves to attract attention, not only on its own merits, but especially on account of its contents. First among these is the Stanley Congo medicine chest, so shaped and made that it can easily be placed on a mule's back, can be immersed in water and exposed to the hottest climate without damage to the large assortment of medicaments that are compressed within its limited space. By the side of these are handy little leather pocket-cases holding a plentiful supply of sixteen medicaments, and weighing about half a pound. Most of these medicaments take the form of tabloids, which indeed constitute the principal speciality of this firm. In this manner Messrs. Burroughs, Wellcome, and Co. exhibit some of the newest medicaments. Among these are five-grain tabloids of sulphonal—diethylsulphondimethylmethan $(CH_3)\ 2 = C = (C_2\ H_5\ SO_2)\ 2$; and salol (salicylate of phenol) $C_{13}\ H_{10}\ O$. There is also ichthyol (sodium sulpho-ichthyolate), which is derived from an extinct and antediluvian fish found in a petrified condition in the Tyrol mountains and elsewhere. This is distilled, and a product obtained, which, when purified, becomes a sulphur compound called ichthyol, and is recommended on the ground that the sulphur is more easily dissolved and more readily assimilated. They also exhibit all the transformations of sheep's wool till it becomes lanoline. The theory is that fat from the body, or lard, contains glycerine, and by oxidation becomes rancid. Fat derived from hair, wool, or horny tissues contains cholesterine, which cannot become rancid, is also more readily absorbed, and has a greater penetrating power on the tissues of the skin, and it is therefore recommended as a suitable basis for many ointments. Further, lanoline does not saponify, so that the 10 per cent. of lanoline which the soap contains remains in the water, and a part of it may be reabsorbed by the skin, where it replaces the grease removed by the alkali of the soap, thus conferring exceptional suppleness and softness. There are many other novelties in this stand, notably Vereker's patent ammonium chloride inhaler, which will not fail to attract medical visitors.

Close at hand are various chemical exhibits, many of them illustrating the great progress achieved of recent years on the utilisation of waste products. For instance, Messrs. Chance Brothers (Alkali Works, near Birmingham) show some beautiful flower of sulphur recovered from the vilest-looking vat waste of the Le Blanc alkali process; and the Eglinton Chemical Company, of Glasgow, have some silicate bricks made from waste which won them a silver medal at the Edinburgh Exhibition. This firm is notoriously celebrated for its bichromates, and they look almost like jewels glittering in their case. Messrs. Brunner, Mond, and Co., of Cheshire, have some muriate of ammonia which they convert into sesqui-carbonates and then into pure bicarbonates, and this is all obtained from the waste of gas manufacture. So also the Clayton Aniline Company are able to recover from the waste in the manufacture of aniline oils, used for dyes &c., nitric, sulphuric, and carbolic acids, and the result of this process is exhibited in this part of the English Section.

Crossing the avenue or isle, other exhibitions will be found, and among them are included Broad's patent night-lights. This is a somewhat different subject, particularly as the excellence of these night-lights does not depend on any chemical improvement in the process of manufacture. A better light is given, because the wick is plaited instead of twisted; then it is fixed to a little piece of tin, so that it stands upright even when the surrounding wax is all melted. Other night-lights have a plaster basis, which advantageously replaces the saucer, and thus avoids some trouble and some of the risk of fire. Finally these night-lights are exceptionally cheap. As useful adjuncts to the sick room any improvement in respect to night-lights is welcome.

Against the western wall hard by is a display of floor-cloths, &c., which are of importance from a sanitary point of view. The Corticine Floor Covering Company have a very big show of their floorcloth and cork carpet. The multiplicity of patterns they exhibit prove that it is easy to have a floor covering that is impermeable, that can be washed at any time, that does not absorb dust, and yet that is rich in colour and in design. Close by, Messrs. Treloar and Sons have their cocoa-nut matting, which is so useful to keep houses clean, and possesses the further merit of being cheap. The Mitcham Linoleum and Floorcloth Company give away very pretty carpet designs, reduced in size, which are pleasing mementoes. This is another example of what can be used in apartments instead of the dust and germ-absorbing carpet. Here also Messrs. Woollams and Co. show their highly artistic paper-hangings in a very effective way. They have built up the side of a room, with pictures and prints hanging from the wall and a little furniture underneath. Thus the effect of their wall-paper is fully realised. It is not a sample, but a practical and complete illustration, of its application. The wall-papers of the eastern vestibule, near the Porte Rapp, are manufactured by this firm, and this is an illustration of their fabrics given on a gigantic scale. In every case the paper is guaranteed free from arsenic. There are, finally, some beautiful samples of imitation embossed leather that will delight amateurs. Messrs. Jeffrey and Co. have also all classes of artistic wall-paper free from arsenic, and make a vast show, giving an entire wall with wainscoting effects. Some of the designs are by Walter Crane and other eminent artists, and this firm has contributed to the decorations of the central entrance, the vestibule, and the offices of the English Exhibition Committee. Fisher's patent wall-hangings offer a special advantage; though cheap, they can be washed. The paper on canvas is entirely grounded and printed in oils; it can therefore be scrubbed with soap and water. This undoubtedly is a great advantage, and will contribute very largely to the cleanliness and healthiness of the sick-room, the nursery—in fact, every sort of habitation.

The Congress on the Housing of the Poor was followed by another Congress on a somewhat kindred subject—namely, the Intervention of the State in Labour Contracts, by such Legislation as, for instance, Factory Acts. M. Donnat, member of the Paris Municipal Council, where he represents, as M. Yves Guyot does in the National Assembly, the extreme individualist doctrines, was President of this Congress. In the main, the Congress was organised and attended by those who are opposed to State interference in social and economical matters, and the working-class element was only remarkable by its absence. Delegates attended this Congress from Spain, Italy, Denmark, Brazil, Canada, Austria, Russia, San Salvador, and Chili. The proceedings were opened by M. Neubourg, barrister at the Paris Court of Appeal, who gave a summary of the arguments both for and against the intervention of the State in regulating the work of children in factories &c. He pointed out that the movement in favour of State interventions was undeniably gaining strength every day, a fact which he traced to the unequal distribution of wealth. The Roman law had always favoured the parent; the Germanic laws favoured the child. Thus the Belgians, acting more under the influence of Roman civilisation, were the last to admit that the State should protect the child against its parents; while the English, on the contrary, gave an example in this

direction so far back as the year 1802. The first French law bore the date of 1841, the next 1874, and there is a new project before the National Assembly. Intervention is based on the interests of the entire community. The proportion of men capable of rendering military service is constantly decreasing in industrial districts. The first law passed on this subject in Prussia was based on the report of a military officer. The elder Pitt had said, "Take the men from the factories, make soldiers of them, and put the children there instead." But the result was so destructive of the stamina of the population that soon the cry was raised of "Save the children." M. Roneaud protested against so much legislation, as tending to destroy freedom. M. Notter pointed out that orphan girls became the heads of families, and it would be disastrous to interfere with their work. M. Villier, the well-known and able correspondent of the *Temps*, insisted that the workmen themselves objected to such legislative interference as tended, by reducing the hours of labour, to reduce their slender earnings. The reports of State inspectors went to show that children in, for instance, the sardine-preserving ports strayed, uncared for, in the streets during the busy season, and that it would be much better for them if they were allowed to work. The same might be said in agricultural districts during the jam-making season. M. Levaud argued that conditions varied so much in different districts that the local authority should have the power to settle to what extent children might work. M. Chépié, deputy for the Rhone district, objected that this would mean the mayor, and the mayor was too much under local influences to be able to act impartially in such matters. M. Villier also remarked that local commissions did not work. They were often composed of rival manufacturers, who from motives of delicacy refrained from visiting each other's manufactories. Mr. Adolphe Smith, taking up the debate from a somewhat English point of view, protested against the assertion that children should be made to work early. This was opposed to all medical evidence, and recommended those who had any doubts to read the official evidence collected before the passing of the English Ten Hours Bill. As one of THE LANCET Sanitary Commissioners, he had recently visited the unfortunate women and female children who worked at chain and nail making in the Cradley Heath district, with the result that he had found normal childbirth the exception, and false presentation the rule. He suggested that the members of the Congress should make themselves acquainted with the heartrending revelations made before the House of Lords' Commission on Sweating. These disclosures had given rise to a feeling not merely in favour of interfering with the work of children in factories, but with their work in those domestic workshops where entire families ate, slept, and toiled in one small overcrowded room. The evidence published in THE LANCET, and given before the law courts and elsewhere, distinctly proved that this has been the cause of spreading infectious fevers, and therefore the demand had arisen that every workshop, even if it was a workman's bedroom used as a workshop, should be registered and inspected in the same manner as a factory. Mr. Smith, however, strongly endorsed M. Chépié's opinion that the local authority was not competent to accomplish such a task. In England it too often happened that members of the local authority were the principal transgressors against the laws devised for the purpose of protecting public health. Dealing with the question in a general sense, it would be found that regulations limiting the hours of labour and rendering workships more healthy gave rise to one great objection: they increased the cost of the output, and, in face of foreign competition, this was a grave obstacle. But competition should be based on the excellence of the work done, and not on overworking women and children, and thus destroying the health of entire populations. Therefore, as this was an International Congress, he concluded by expressing the hope that the Congress would use all its influence to assimilate the laws of the various States of Europe. In this manner the argument of foreign competition would no longer have any force. After a few more observations from M. Villier, the President brought the discussion to an end by declaring that the Congress evidently agreed that the Legislature should interfere with the work of children so as to protect their health. How far this was to be done by the municipalities or by the Central Government was a question on which the Congress was more divided in its opinion.

Paris, July 9th

MALCOLM MORRIS INDEMNITY FUND.

THE following additional subscriptions to the above fund have been received:—

Amount previously acknowledged	£123	6	6
Dr. Pavy	5	5	0
Sir Morell Mackenzie	5	5	0
Dr. Hughlings Jackson	5	5	0
William Adams, Esq.	5	5	0
Dr. Donald Hood	5	5	0
Dr. Montagu Handfield-Jones	5	5	0
Sympathising Patient	5	5	0
Sir Joseph Lister	5	0	0
Dr. Matthews Duncan	3	3	0
Sir J. Crichton Browne	2	2	0
Dr. Graily Hewitt	2	2	0
Dr. Lees	2	2	0
A. T. Norton, Esq.	2	2	0
H. T. Butlin	2	2	0
H. W. P.	2	2	0
Dr. Frank (Cannes)	2	2	0
W. A. Meredith, Esq.	2	2	0
Dr. Glover	2	2	0
Dr. G. May (Reading)	2	2	0
G. W. H. Bailey, Esq.	2	2	0
Dr. McCall Anderson (Glasgow)	2	2	0
William Rose, Esq.	2	2	0
Dr. Fitzpatrick	2	2	0
Dr. MacLaren	2	2	0
Dr. Scanes Spicer	2	2	0
F. M. Mackenzie, Esq.	2	2	0
Dr. Walter Pearce	2	2	0
Dr. Holman (Reigate)	1	1	0
F. J. Gant, Esq.	1	1	0
Dr. Alderson	1	1	0
N. Davies-Colley, Esq.	1	1	0
Rev. E. and Mrs. Montagu	1	1	0
Edmund Owen, Esq.	1	1	0
C. A. Ballance, Esq.	1	1	0
Dr. T. Barlow	1	1	0
Dr. Ross (Manchester)	1	1	0
Dr. Sidney Coupland	1	1	0
Dr. J. M. Bright (Forest-hill)	£1	1	0
J. Scott Battams, Esq.	1	1	0
Dr. Seymour Taylor	1	1	0
Dr. Cholmeley	1	1	0
Dr. Keyser	1	1	0
Dr. Cleveland	1	1	0
Rickman J. Godlee, Esq.	1	1	0
Dr. Hadden	1	1	0
Alban Doran, Esq.	1	1	0
J. Pugin Thornton, Esq.	1	1	0
Dr. Thin	1	1	0
Dr. Finlay	1	1	0
Shirley Murphy, Esq.	1	1	0
Henry Sewill, Esq.	1	1	0
Dr. A. P. Luff	1	1	0
Dr. Sutherland	1	1	0
Dr. Brace	1	1	0
Dr. G. M. Mead (Newmarket)	1	1	0
Dr. David Little (Manchester)	1	1	0
Dr. Oliver (Harrogate)	1	1	0
Dr. Roberts Portmadoc)	1	1	0
Dr. Barr Meadows	1	1	0
J. J. Gawith, Esq.	1	1	0
Dr. Major (Bradford)	1	1	0
W. Anderson, Esq.	1	1	0
G. Borlase Hicks, Esq.	1	1	0
Dr. Payne	1	1	0
Dr. J. Elliot Square (Plymouth)	1	1	0
H. Cripps Lawrence, Esq.	1	1	0
Dr. Savage	1	1	0
Dr. George Mackesy (Waterford)	1	0	0
Dr. William Mackesy (Waterford)	1	0	0
A. W. H. Walker, Esq. (Harrogate)	0	10	6
Herbert Sieveking, Esq.	0	10	6

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Middlesex and Herts Combined Districts.—Although the report for 1888 on this combination of sanitary districts is the fifteenth that has been issued, it is the first since Mr. W. Thompson has succeeded to the post of medical officer of health. Taking the districts as a whole, the death-rate for the year was 14·9 per 1000, which is an unusually low rate, and it is in part assigned to the exceptional meteorological conditions which prevailed, and which prevented the rise of diarrhœal affections, whilst, by abundance of rain, surface impurities were washed away. But at the same time Mr. Thompson is able to congratulate the sanitary authorities on progressive sanitary administration. There remain, however, matters as to which further progress is needed, and the questions of securing a greater dryness of the subsoil by artificial means of drainage, the provision of adequate means for the isolation of infectious diseases in several of the constituent districts, and the need for prompt action to prevent the diffusion of infection through the agency of schools are specially adverted to. Stress is also laid on the need for the general adoption of reguiations as to the construction and management of cowsheds and dairies. Following on the general report are special ones dealing with the vital statistics, the sanitary state, and the needs of each of the component sanitary areas. Thus the need for water-cisterns not liable to contamination at East Barnet, for closing polluted wells at Bourne End in the Berkhampsted Union, for proper means of sewage disposal at Hemel Hempsted, for proper means of drainage at Woodridings near Pinner, and such like matters, are especially adverted to.

Lowestoft Urban District.—Dr. W. A. S. Wynne only assumed charge of this district in September last, but he has, notwithstanding, prepared a report of considerable value, in which he discusses a number of points bearing upon the sanitary state of the borough, including an account of the geology and meteorology of the district. The vital

statistics are also studied for a series of years. During 1888 the annual rate of mortality from all causes was 15·7 per 1000, and that from zymotic diseases 1·26. Some enteric fever in Roman Hill was carefully investigated, and precautionary measures, including removal to the sanatorium, were urged. Milk came under suspicion as a cause of the disease, but no proof of this could, under the somewhat complicated circumstances, be established. We are glad to learn that some important improvements relating to the ventilation and repair of the system of drainage are in contemplation.

Friern Barnet Urban District.—General improvement in the sanitary circumstances of this district has marked the year 1888; but a constant service of water is much needed. Indeed, some offensiveness of sewer ventilators is, in all probability, associated with a lack of water, quite apart from other needs; and the limited supply especially tells in faulty flushing of house drains. To confine the water-supply to half an hour or one hour a day is rightly termed by Mr. Hugh Stott a barbarous system in these modern days. The death-rate for 1888 was only 10·2 per 1000, and the district has been fortunately free from enteric fever and diphtheria; the zymotic rate of 1·5 per 1000 being largely due to some prevalence of whooping-cough.

Hexham Rural District.—Dr. Maclagan's report opens with a somewhat lengthened statement of complaint against the corporation of Newcastle-on-Tyne for the manner in which their town refuse is disposed of in this rural district, but it was found that the remedy must, in the main, lie with the owner of the land on which the nuisance arises. Regulations as to cowsheds and dairies have been made. In compiling these, the Local Government Board urged that, instead of 400 cubic feet per cow, the amount should be 800. The Hexham authority, whilst feeling they could not enforce this, agreed to 600 cubic feet, and they have given notice that where this is not available more space must be provided or else the number of cows must be reduced. Registration of cowkeepers is also in progress. Details are given as to the current sanitary administration, as to infectious diseases and the precautions adopted against them, and the vital statistics are discussed in some detail. Allowing for increase of population, the death-rate for last year is set down as 14·7 per 1000 living. Once again Dr. Maclagan refers to the unnecessary and painful excess of mortality under one year of age, and he urges that a Royal Commission should be appointed to discuss the subject.

Bedford Rural District.—Dr. Prior analyses the death returns for a period of years, and is able to record a low death-rate of 14·89 per 1000 for 1888. Diphtheria was very limited in its operations during the year, no cases being heard of in some thirty-six villages, and there are grounds for believing that the disease was absent from these places even in its latent form. The eight deaths and the corresponding cases that did occur are discussed; and it is pointed out how some of these took place in peculiarly healthy localities. An outbreak of enteric fever at Carlton is also referred to, but its causation remains somewhat obscure. Whilst general sanitary work has been in progress, nothing has been done to provide more suitable hospital accommodation; and we note incidentally that, whilst removal to the existing building was earnestly advocated in some cases of diphtheria, it was altogether refused by the parents of the sick. Nothing short of a suitable and reasonably attractive building will secure early, and hence effectual, isolation.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5576 births and 3249 deaths were registered during the week ending July 6th. The annual rate of mortality in these towns, which had been 16·6, 16·7, and 17·3 per 1000 in the preceding three weeks, further rose last week to 17·7. During the thirteen weeks of last quarter the death-rate in these towns averaged 18·2 per 1000, and was 2·1 below the mean rate in the corresponding periods of the ten years 1879-88. The lowest rates in these towns last week were 11·2 in Nottingham, 11·6 in Brighton, 12·1 in Oldham, and 13·8 in Derby. The rates in the other towns ranged upwards to 25·3 in Manchester, 26·9 in Leeds, 29·0 in Preston, and 29·2 in Newcastle-upon-Tyne. The deaths referred to the principal zymotic diseases in these towns, which had been 400 and 476 in the previous two weeks, further rose last week to 700; they included 377 from diarrhœa, 97 from measles, 81 from whooping-cough, 58 from diphtheria, 55 from scarlet fever, 32 from "fever" (principally enteric), and not one from small-pox. These zymotic diseases caused the lowest death-rates last week in Blackburn, Wolverhampton, and Halifax, and the highest rates in Leeds, Salford, and Preston. The greatest mortality from diarrhœa occurred in Birkenhead, Salford, Leeds, Preston, and Leicester; from measles in Wolverhampton, Hull, Manchester, Bolton, Halifax, and Preston; from whooping-cough in Cardiff, Oldham, and Newcastle-upon-Tyne; and from scarlet fever in Salford and Plymouth. The death-rate from "fever" showed no noticeable excess in any of these large towns. The 58 deaths from diphtheria showed a marked excess upon the numbers in recent weeks, and included 38 in London, 4 in Manchester, 3 in Salford, 3 in Birmingham, 2 in Bristol, 2 in Bradford, and 2 in Newcastle-upon-Tyne. Small-pox caused no death in any of the twenty-eight great towns; and no small-pox patient was under treatment at the end of the week either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum and London Fever Hospitals at the end of last week was 576, against 559 and 569 on the preceding two Saturdays; 73 cases were admitted to these hospitals during the week, against 33, 44, and 64 in the three previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 171 and 169 in the preceding two weeks, further declined last week to 143, and were 65 below the corrected average. The causes of 78, or 2·4 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Oldham, Leicester, Sunderland, Portsmouth, and in seven other smaller towns. The largest proportions of uncertified deaths were registered in Hull, Sheffield, and Brighton.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·5, 19·4, and 18·4 per 1000 in the preceding three weeks, rose again to 21·3 in the week ending July 6th; this rate exceeded by 3·6 the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged last week from 15·8 and 16·3 in Perth and Leith, to 22·6 in Greenock and 25·7 in Glasgow. The 545 deaths in the eight towns showed an increase of 74 upon the number in the previous week, and included 26 which were referred to measles, 21 to whooping-cough, 22 to diarrhœa, 6 to diphtheria, 2 to scarlet fever, 1 to "fever," and not one to small-pox; in all, 81 deaths resulted from these principal zymotic diseases, against 95, 83, and 79 in the preceding three weeks. These 81 deaths were equal to an annual rate of 3·2 per 1000, which was 0·6 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of measles, which had been 26, 21, and 24 in the preceding three weeks, rose again last week to 26, of which 13 occurred in Glasgow, 9 in Aberdeen, and 4 in Leith. The 24 deaths from whooping-cough corresponded with the number in the previous week, and included 18 in Glasgow. The deaths attributed to diarrhœa, which were 18 and 17 in the preceding two weeks, rose last week to 22, and exceeded the number in the corresponding week of last year by 12. Four of the 6 fatal cases of diphtheria were returned in Edinburgh. The deaths from the principal diseases of the respiratory organs, which had declined in the preceding four weeks from 93 to 71, rose again last week to 80, and were 3 below the number in the corresponding week of last year. The causes of 52, or nearly 10 per cent., of the deaths registered during the week in the eight towns were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 18·6 and 23·2 per 1000 in the preceding two weeks, declined again to 22·8 in the week ending July 6th. During the thirteen weeks of last quarter the death-rate in the city averaged 23·6 per 1000, the mean rate during the same period being 16·0 in London and 16·6 in Edinburgh. The 154 deaths in Dublin showed a decline of 3 from the number in the

previous week; they included 3 which were referred to diarrhœa, 2 to "fever," 2 to measles, 1 to scarlet fever, and not one either to small-pox, diphtheria, or whooping-cough. Thus the deaths from these principal zymotic diseases, which had been 7 and 15 in the previous two weeks, declined again last week to 8; they were equal to an annual rate of 1·2 per 1000, the rates from the same diseases being 3·3 in London and 1·8 in Edinburgh. The deaths from "fever" and from measles showed a decline from the numbers in the previous week. The deaths of infants exceeded by 6, while those of elderly persons were fewer by the same number than those returned in the preceding week. Seven inquest cases and 6 deaths from violence were registered; and 52, or more than a third, of the deaths occurred in public institutions. The causes of 12, or more than 8 per cent., of the deaths in the city were not certified.

THE SERVICES.

ARMY MEDICAL RESERVE OF OFFICERS.—Surgeon Edgar William Willett, M.B., the London Division, Volunteer Medical Staff Corps, to be Surgeon, ranking as Captain (dated July 10th, 1889).

MILITIA (Infantry).—5th Battalion, the Connaught Rangers: The undermentioned Officer is transferred from the 8th Battalion, the Rifle Brigade (the Prince Consort's Own):—Surgeon-Major R. Bradshaw (dated July 6th, 1889).

ADMIRALTY.—The following appointment has been made: Surgeon Wm. E. Home to the *Britannia* (dated July 3rd, 1889).

VOLUNTEER CORPS.—*Artillery:* 1st Volunteer (Devonshire) Brigade, Western Division, Royal Artillery: Surgeon G. P. Barton to be Surgeon-Major, ranking as Major (dated July 6th, 1889).—1st Ayrshire and Galloway: Acting Surgeon W. Moore, M.B., resigns his appointment (dated July 6th, 1889).—22nd Middlesex (Central London Rangers): Acting Surgeon C. W. Macdowell, M.D., to be Surgeon (dated July 6th, 1889).—1st Dumbartonshire: Acting Surgeon W. Drysdale resigns his appointment (dated July 6th, 1889).—1st Tower Hamlets (the Tower Hamlets Rifle Volunteer Brigade): Surgeon J. W. Jackson resigns his commission (dated July 6th, 1889).

VOLUNTEER AMBULANCE DRILL.

The 2nd Volunteer Battalion of the Yorks Regiment has attached to it a bearer company composed of Volunteers who have made themselves efficient in the ranks, and who are permitted by the colonel commanding to devote themselves in camp to their ambulance drill and duty, though wearing the ordinary scarlet uniform of the fighting men. They have in almost every case obtained after examination the War Office certificate of proficiency in first aid to wounded. This somewhat unique regimental bearer company is commanded by Surgeon-Major (ranking as Lieutenant-Colonel) J. W. Taylor of Scarborough. On Thursday week the bearer company attached to the regiment was inspected on behalf of the Principal Medical Officer of the Northern District by Surgeon Sullivan, M.S. In addition to Surgeon-Major Taylor in command, the other medical officers present were Surgeon Bruce Low and Acting Surgeons Colby and Porter. At the close of the inspection, which occupied several hours, Surgeon Sullivan complimented Dr. Taylor on the men under his command and their efficiency, which reflected great credit on the training the men had received. He would report very favourably to the Principal Medical Officer regarding the company. On the following day the two battalions were officially inspected by Colonel Davidson (commanding the 19th Regimental District), who, at the close of the inspection, requested Dr. Taylor to put his men through the stretcher drill. While addressing the regiment at the close of the day's work, Colonel Davidson paid a high compliment to the ambulance, and referred in kind and congratulatory terms to its commander.

THE LEVEE.—The name of Mr. E. Kenneth Campbell, F.R.C.S. Eng., &c., should have been included in the list we published last week of the members of the medical profession presented at the Levée on June 29th.

Correspondence.

"Audi alteram partem."

VARICOCELE WITH PENDULOUS TESTIS.

To the Editors of THE LANCET.

SIRS,—Much stress has lately been laid upon the propriety of shortening the cord in the operation for varicocele with pendulous testis. For this purpose some of the veins and the surrounding tissue are removed. This operation is no doubt a great improvement upon any of those formerly in use, which had for their object simply the obliteration of the veins. But it is not new. At pp. 100–1 of the first volume of my "Practical Pathology," published in the year 1870, the following description is given:—

"The late Mr. Briggs occasionally removed a considerable portion of the skin of the scrotum in cases of pendulous testis, and the cicatrix left maintained the testicle in something like its natural position. This operation succeeded well enough when the case was not attended with enlargement of the veins; but when it was, the removal of the skin could have little or no effect upon the varicocele. At the time to which I refer, no one thought of cutting deeper than the skin, as no means were then in use which would effectually control hæmorrhage from the spermatic veins in case they were wounded. Mr. Briggs' operation, then, was well adapted for a case of pendulous testicle where the veins were not enlarged, but not for a case accompanied by varicocele. A case presented itself some years ago in which the testis hung so low that when the patient lay upon his back it would hang over on the outer side of the left thigh. There was in this instance a well-marked varicocele. Knowing that I had the means by acupressure of controlling the dilated veins, it appeared practicable to combine Mr. Briggs' operation with that for obliteration of the veins. Accordingly, the needles were introduced as far apart as possible, and, after the veins were secured by the '8' ligature passed over the ends of the needles, the intermediate portion of skin, together with subjacent tissues, containing the enlarged veins, was removed, leaving a very considerable gap. No hæmorrhage occurred. The needles were then drawn towards each other, and by this means the edges of the wound were brought together and maintained in position. This was the first case in which this operation was performed. The wound readily healed, and the testis was subsequently retained very nearly in its natural position."

The following is the modification of this operation which I now recommend. After some of the enlarged veins and surrounding tissues have been removed, the open mouths of the remaining divided veins are seared with the black hot cautery. The needles are then withdrawn, and the wound sewn up by deep carbolised catgut sutures from end to end. A piece of lint, saturated with as much blood as can be collected, is placed over the wound, which generally heals almost entirely by first intention. The carbolised sutures are partially dissolved in the course of three or four days, and may come away with the lint when it is removed.

I am, Sirs, your obedient servant,

Savile-row, July 8th. HENRY LEE.

THE FATAL AFFRAY AT LIVERPOOL.

To the Editors of THE LANCET.

SIRS,—A fortnight's confinement to my room with illness prevented me from immediately replying to Mr. Harrisson's letter. This my telegram would explain to you. I had hoped that he would have consigned to the past and try to forget this unfortunate case; but it is not so, and I am compelled to notice some points in his letter, though I would gladly have been saved the trouble.

Mr. Harrisson is incorrect in saying that a consultation was forbidden by the urgency of the case. At 11.30 A.M. he arranged with the brother of the deceased to operate, and when I interviewed him at 12.40 he told me that he would not operate until "after lunch at 1 P.M.—say, 1.30." Two hours, with the staff on the telephone, give ample time for taking opinion. Mr. Harrisson expresses regret that I was not summoned to the examination in time, but he forgets that it was by his express orders that I was refused, after an engagement had been made that I should

be present. The house surgeon, while courteously performing a disagreeable duty, excused himself by saying that Mr. Harrisson had instructed him to so act, and it was on my advice that he referred to his principal for further instructions. Mr. Harrisson's written reply was not that of one who felt "delight" at the prospect of my being present—rather the opposite.

With regard to my being a "hostile witness." Had I chosen to be this, I had only to communicate with the defence, but with kindly consideration for Mr. Harrisson, and with a sincere desire of avoiding the unpleasant publicity that would ensue, I kept the matter so closely that it was only on the day before the trial that the friends of the deceased and the prisoner's solicitor first heard of the accident, so that, to say the least, Mr. Harrisson is not as grateful to me as I would expect. If Mr. Harrisson felt so certain of the prisoner's responsibility, why did he hesitate to disclose the fact of the mishap at the inquest, or at the police-court, or to the prosecuting solicitor? Supposing I had not been present at the operation? We all know the law of the question as it affects the accused person; but the surgeons concerned in the case are not justified in constituting themselves judge and jury regarding it. Nor did the judge silence me. But when he found that I did not directly charge Mr. Harrisson with unskilfulness, he told the defence that he would rule in accordance with what we know to be the law, and he did so, but the jury turned a deaf ear to his charge, and gave the only verdict that justice and humanity dictated. It was not my seeking that I had to appear in the case in court, and I would gladly have kept out of it, as I tried, but it was by the express command of the judge, who had all the facts laid privately before him. Mr. Harrisson says that he "stated clearly before the court that the lateral sinus was opened." He said that "a vein was wounded." Dr. Barron, to whose courteous impartiality I gladly bear witness, stated that septic meningitis was the cause of death, but when I asked him was he prepared to say that the condition of things found by him *could not have arisen in the twenty-three hours that intervened between the operation and the death*, he frankly acknowledged that he could not say this, though he thought it improbable. Inasmuch, therefore, as this doubtful point was not made clear, neither Mr. Harrisson nor anyone else is justified in saying that the man must have died; and I may be permittted to have my own ideas regarding the fatality of such an operation as that I witnessed. Mr. Harrisson is ungenerous when he speaks of the "healthy brain." At the post-mortem examination I recognised, as did the others, the existence of meningitis, and I remarked that otherwise the brain, as well as the rest of the organs, was that of a healthy man. Mr. Harrisson does not understand "my peculiar mental attitude," nor should I expect him to do so. He spent an hour in my consulting-room after the operation with the object of getting me to take his view of the accident; but I did not find sufficient to convert me in his argument that the man *must* have died in any case. If it strikes him that I must, indeed, be a peculiar person to insist on giving fair play to the prisoner, what must I think of Mr. Harrisson's "mental attitude" in opposing me in this act of justice?

I am, Sirs, yours truly,

Liverpool, June, 1889. JOHN S. CLARKE.

*** The publication of this letter has been unavoidably delayed.—ED. L.

CONCURRENCE OF MEASLES AND CHICKEN-POX IN THE SAME SUBJECT.

To the Editors of THE LANCET.

SIRS,—Seeing in the last number of THE LANCET an annotation under the above heading, I send you a brief account of a similar case in my own practice of recent date.

On March 23rd I was sent for to a private school for boys; an epidemic of chicken-pox of a mild type had broken out, so mild that some of the cases had escaped notice. On the evening of March 25th I was asked to see J. D——, a lad of eleven years of age, who had one well-marked vesicle on the face and another on the back. His temperature was 104° F.; his face much flushed; his tonsils enlarged and red; tongue furred; velum palati reddened; no other catarrhal symptoms. On my visit the following morning, his face and chest were covered with small rounded erythematous patches, which afterwards spread to the rest of the body, and the usual catarrhal symptoms of an ordinary but heavy attack of measles were present; the temperature was two degrees less than the night before. The measles followed the usual course, and on the fourth day, the rash still being well out, the face and chest became scattered over with vesicles of chicken-pox, a few appearing on the limbs also. The eruption of the measles disappeared on the sixth day, but the chicken-pox vesicles did not desiccate until ten days later. This was the only case of measles in the school at the time, but there was an epidemic of it in the neighbourhood. When the lads recovered from the chicken-pox they went home for the Easter holiday, apparently in good health, but most of them were subsequently attacked with measles.

I am, Sirs, yours faithfully,

Great Malvern, July 9th, 1889. F. W. JOSHUA.

SIRS,—In THE LANCET of July 6th a case of concurrent chicken-pox and measles is brought under notice, and the rarity of the coexistence of these two diseases commented on. A short notice of a case that came under my observation may therefore be of interest, one which occurred during the prevalence of a severe and extensive epidemic of measles in the autumn of 1884.

The patient was a girl aged eight, whom I first saw on Nov. 8th. She was then suffering from catarrh, and on her body were a few well-marked chicken-pox vesicles, along with some papules. Her temperature was normal. I was told that the catarrh had begun on the 3rd, and that the spots had been first noticed on the day before my visit. On the 9th a scanty but thoroughly characteristic eruption of measles had appeared, and the chicken-pox vesicles had increased in number. The temperature was 101°. On the 10th the eruption of measles seemed to be getting faint, and a number of the chicken-pox vesicles were drying. The temperature was normal. By the 12th the measly eruption had disappeared, and the remainder of the vesicles were drying up. The child made a good recovery. One or two other members of the family suffered from measles, but this was the only case of chicken-pox in the house.

I am, Sirs, yours truly,

ANDREW DUNLOP, M.D.,
Consulting Physician to the Jersey General Dispensary and Female Orphans' Home.

July, 1889.

ELECTION OF COUNCIL AT THE ROYAL COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—I most cordially thank all those gentlemen who have recorded their votes in my favour, and all those also—many of them previously unknown to me—who have written me very kind and encouraging letters. I venture to hope that a large number of Fellows who have on this occasion voted for particular candidates will, if I am spared to come forward next year, favour me with their support, and that a much larger proportion will avail themselves of the new power of voting by proxy papers.

I am Sirs, yours truly,

Clifton, July 6th, 1889. CHARLES STEELE.

SHORTHAND FOR MEDICAL STUDENTS.

To the Editors of THE LANCET.

SIRS,—The Shorthand Examination Committee, after careful consideration, have decided that the examination shall be limited to Pitman's phonography. They are convinced that the original intention—to examine candidates also in other systems—would be to sacrifice the real interests of the profession, for which uniformity of system is of the utmost importance, and that its chief result would be to cause a small percentage of the students who acquire shorthand to find themselves out of harmony with the rest. Probably some of these would endeavour to learn the system of the majority in time that should be devoted to their proper studies. The committee is satisfied that Pitman's phonography is the only system by which uniformity can be now secured, and that it is perfectly adequate for all the desired purposes. To prevent misconception, they would state that they consider it most undesirable that students should be encouraged to learn shorthand during the medical session, when their time should be fully occupied with special work. To avoid

the risk of special practice during the beginning of the session, they propose to hold the examination in the first week of October. The date will be announced in the "Students' number" of each medical journal, and also, it is hoped, on the synopsis of the examination, which will be ready on July 15th, and can then be obtained either at Lewis's library or by post from the Hon. Secretary, 16, Queen Anne-street.

The committee will be glad to receive donations (which may be sent to Dr. Gowers, Hon. Treasurer) towards the expenses of the examination from all who approve it. (The approval of only a few was obtained in the first instance, almost without selection, in order to establish the proposal.) It is desired now to obtain enough to meet the expenses for two or three years, and also to obtain the financial support from as wide an extent as possible. While larger donations will, of course, be gladly received, those of five or ten shillings will also be welcomed. The following have been already received or promised, and the committee would beg to express their appreciation of the effective value of the support accorded to the proposal by those whose names head the list.

Shorthand Examination Fund.

Sir Wm. Jenner, G.C.B.	£5	5	0	Howard Marsh, Esq.	£1	1	0
Sir Joseph Lister	3	3	0	Dr. Hughlings Jackson	1	1	0
Sir Henry Acland	1	1	0	Dr. Gray, Oxford	1	1	0
Sir William Roberts	1	1	0	Dr. Gowers	1	1	0
Sir Dyce Duckworth	1	1	0	Dr. Howard Tooth	1	1	0
Dr. Wilks	1	1	0	Dr. Coupland	1	1	0
Dr. Quain	2	2	0				

Subscriptions have also been received from Dr. Pye-Smith, Dr. Mitchell Bruce, and Dr. Fergusson, Cheltenham.

I am, Sirs, yours faithfully,

July 8th, 1889. SIDNEY COUPLAND, Hon. Sec.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Gateshead and Newcastle.

THE Newcastle City Council agreed the other day to increase the salary of the medical officer of health, Mr. H. E. Armstrong, from £550 to £650 per annum. This increase has been well deserved, but rather tardy in coming. The duties of the office have much increased of late years, and have been performed by Mr. H. E. Armstrong with marked assiduity and faithfulness. The medical officer of health for Gateshead, Dr. W. Robinson, has presented his report on the health of the borough for the past year, and his painstaking and practical statements present many points of sanitary interest. He states that the population of Gateshead, according to the estimate of the Registrar-General, up to June, 1888, was 81,363. The zymotic death-rate was 1·6 per 1000, while the general death-rate has been 17·0 per 1000 per annum. There has been in Gateshead a steady reduction in the general death-rate, in the zymotic death-rate, and also in infant mortality. Dr. Robinson is strongly of opinion that a medical attendant should be paid by each school to visit and certify as to the nature of the illness in the case of absent children not attended by a medical practitioner, and he favours the proposed law as to compulsory notification by the householder as well as by the medical attendant. Dr. Robinson further shows that otherwise the sanitary authority will have no means of knowing of the existence of infectious and dangerous diseases, which it may be the householder's object and interest to conceal.

Hospital Sunday in the North.

The trades friendly societies of Middlesbrough had their annual demonstration last Sunday. After the procession a public meeting was held, and Dr. Ellerton presided. The collection at the meeting, and at the procession *en route*, amounted to £74. The West Hartlepool societies had also a very successful demonstration, which resulted in a collection of £75. But the value of these meetings is not to be estimated by the amount collected on the spot, for the increased interest in hospital work must also be taken into account.

Borough of Tynemouth Infirmary.

It is said that the new infirmary at North Shields is progressing so well that arrangements are being made for its opening on Aug. 3rd. The ceremony will be performed by Earl Percy, whose interest—in common with his family—in all charitable works in the county is well known. As only £500 is required to open the institution free from debt, it is to be hoped that this desirable object may be accomplished.

Hexham.

I regret to learn that Dr. Maclagan, of Riding Mill, met with a serious mishap on Tuesday. As he was walking through Hexham from a meeting of the sanitary authority, he slipped and fell heavily, causing a fracture of the middle of the femur. He was promptly attended, and conveyed to his house under the care of Mr. Kendal of Hexham. Dr. Maclagan was President of the Northern Branch of the British Association last year. He is a brother to the Bishop of Lichfield and also to Professor Sir Douglas Maclagan of Edinburgh. Much sympathy is expressed in the north with Dr. Maclagan in his misfortune, and I am glad to hear that he is doing well.

Newcastle-on-Tyne, July 11th.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

Edinburgh University Union.

DURING the past week the New Union Buildings have twice been thrown open, once on the occasion of the Acting Committee holding a reception, at which the Ladies' Committee for the fancy fair and the Union ball were entertained, when every one of the 300 guests seemed to be pleased with the building, and the greatest satisfaction was expressed by some with the admirable arrangements made for the accommodation of the students. The second occasion was at a meeting of the General Committee of the Union, which was held under the chairmanship of the Chancellor of the University, Lord Justice Inglis. In the report submitted, it was stated that there had been received a sum of £15,367 13*s.* 11*d.*, which was accounted for in the following manner:—Private individuals, £1693; donations from Edinburgh Town Council, £100; Senatus Academicus of the University, £500; proceeds of fancy fair, £9756 10*s.*; proceeds of concerts, theatricals, and lectures, £203; interest on deposit receipts, £638; proceeds of last University ball, £247 3*s.* 11*d.*; and the balance of £2230 in hand on March 31st, 1885. The expenditure was as follows:—Price of site, £2000; handed over to the trustees, £1000; paid to contractor, £10,580 19*s.* 6*d.*; clerk of works, £83 4*s.*; advertising, stationery, &c., £117 17*s.* 10*d.*; bank interest, £29 6*s.* 5*d.*; miscellaneous, 1*s.* 8*d.*—total, £13,811 9*s.* 5*d.*, leaving to the credit of the treasurer a sum of £1556 4*s.* 6*d.* There still remained liabilities, including £652 12*s.* 6*d.* estimated for furnishing, amounting to £1990 5*s.* 6d., which left an actual deficit of £440 1*s.* The committee recommended that the Union be opened in October, as its usefulness might be seriously impaired if it remained unopened after that date. By careful management and moderate prosperity they hoped to wipe off the debt in two or three years. Professor Masson, in proposing that the constitution of the Union as submitted be adopted, said that all those connected with the University of Edinburgh should express their joy that at last the University had been provided with something in which hitherto it had been notoriously deficient. There was no doubt that for the real purpose of student life a great deal of solitude was required. On the other hand, the student devoted to intellectual matters would be grievously lop-sided, unless he had also the opportunity of meeting and conversing with and, if necessary, fighting with his fellow-students.

The Health of Edinburgh.

Dr. Littlejohn reports that during the month of June the death-rate was 14·38 per 1000 of the estimated population, compared with an average death-rate during the month of June for the five years preceding 1889 of 17·16 per 1000. Diseases of the chest were responsible for 27·50 per cent. of the total mortality, 13·43 per cent. were due to debility or old age, and 6·87 per cent. to zymotic diseases. During the past quarter the total number of deaths had been 1011, compared with 1145 in the corresponding quarter of last year, and 1175 in the same period of 1887. During the past half-year the deaths were 2143, a smaller number than for the past six years. During the past half-year 448 patients

have been admitted into the City Fever Hospital; 423 were discharged, and 21 died. The majority of the cases were scarlatina, whooping-cough, erysipelas, and typhoid fever, and two cases of typhus fever. The fees due to medical practitioners for reporting cases of infectious disease in Edinburgh during the past half-year amounted to £101 15s., compared with £516 for the corresponding half-year of 1888. There were 814 such cases reported. It was also reported that during the month no less than 19,585lb. of diseased meat was seized or given up in Edinburgh, 6539lb. from the country and 13,046lb. from the city. During the past half-year there were 91,972lb. of diseased meat confiscated, 47,647lb. from the country, and 44,325lb. from the city. Last month a sum of £127 was paid by way of compensation, and it is suggested that in certain cases of tuberculosis some compensation may be paid.

Inter-University and United Hospitals Sports.

On Saturday afternoon I found my way down to the Powderhall running grounds to witness the University Athletic Club Sports, in which the United Hospital students were taking part. The London men fairly outpaced their northern rivals, carrying off six first prizes and dividing the honours in two events, though in no instance, curiously enough, did they gain a second place. The Edinburgh men took two first prizes, divided the honours in the two events, and came in for eight second prizes. It was exceedingly interesting to note with what perfect impartiality the spectators cheered any good performance. The London "medicals" were quite as popular as the Edinburgh students, in fact if anything their reception was even warmer than that accorded to their colleagues. Professor Annandale welcomed the London students, and congratulated them on the results of the various competitions, after which Mrs. Annandale gracefully presented the prizes, and was accorded three hearty cheers by the competitors and their friends.

The End of the Summer Session.

The work of the Summer Session is now rapidly approaching completion, and all the Examining Boards are in full swing. The University Final Examinations were brought to a termination last Saturday. The exact percentage of rejections has not yet been made known, but it appears to be fully as high as usual. Last week also the First Professional Examination of the Conjoint Board was held. The Second Professional Examinations of the same Board are now being held. This week, the University Second Professional Examinations are taking place, and it is said that the entries are more numerous than on any former occasion. These are to be followed by the First Professional Examinations.

The Queen Victoria Nurses' Institute (Scottish Branch).

The honorary treasurers (Sir Thomas Clark and Mr. A. H. Hobson) have received from the Royal College of Physicians, Edinburgh, through the treasurer (Dr. P. A. Young), a donation of 250 guineas to the Scottish Branch of the Queen Victoria Nurses' Institute.

Edinburgh, July 9th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

Lunacy in Ireland.

THE annual report of the inspectors of lunatic asylums will not be issued until next month, but I learn that it will show that during 1888 the number of certified lunatics has increased by 1697, of whom sixty-one are criminal lunatics. The inspectors draw attention to a very serious matter—viz., the refusal of medical practitioners for some years past to sign certificates in cases of insanity, in consequence of the fear of litigation. It would be a matter of considerable importance if the proposed Lunacy Bill was to become law this session, although there are few so sanguine as to believe it will be passed this year.

Pharmacy Certificates.

The Council of the Royal College of Surgeons have, it is stated, adopted a resolution in reference to pharmacy certificates for the First Professional Examination of the Conjoint Scheme of the Colleges of Physicians and Surgeons. After October the College will not accept any pharmacy certificate unless taken out at a hospital or medical school. This resolution strikes at the pharmaceutical chemists, who may be said to prepare at least three-fourths of the students taking out the certificate, and, as no complaints have been heard as to the way their pupils were prepared, it appears a hardship to cancel a regulation which worked fairly.

Steevens' Hospital, Dublin.

The governors have appointed Mr. M'Causland a visiting surgeon to the hospital, in the room of his late brother-in-law, Mr. Robert M'Donnell. Mr. M'Causland has been resident surgeon for some time, and when Mr. M'Donnell's untimely decease occurred it was generally understood that Mr. M'Causland would fill the vacancy.

The Malodorous Liffey.

For some time past the stench from this river, particularly in ihe vicinity of Grattan Bridge, has been very bad. The Public Health Committee have given an order to remove the offensive banks of mud which lie exposed at low water; but by keeping this mud constantly covered by a few feet of water, which could easily be accomplished by the erection of floodgates, the noxious effluvia to a great extent would be minimised, while the expense would be inconsiderable.

Out-door Relief in the Cork Union.

The recent investigation by the guardians has shown the existence of such irregularities in relation to the system of out-door relief to parties belonging to the Cork Union that they have requested the Local Government Board to hold a sworn inquiry into the matter. I understand that Colonel Spaight, the inspector of the district, will shortly institute an inquiry on the subject referred to.

The salary of Mr. S. B. Keers, medical officer of the Dirraw Dispensary, Ballymoney Union, has been increased by the sum of £20 per annum.

Dublin, July 9th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Sanitary Department.

AN economy commission reduced in 1888 all the various budgets of the Government, and diminished the sanitary service by £6841. This was chiefly done by dismissing apothecaries, and compelling the district doctors to dispense their own medicines. The so-called health officers have been increased in number from seventy-six to ninety-two, a staff strangely inadequate for a population of 6,000,000. There have been four cases of hydrophobia in four different parts of Egypt during the last twelve months, but in no case has the dog been seen by any competent authority. An Austrian, bitten by a reputed rabid dog, went to Europe to undergo the Pasteurian treatment. He died of hydrophobia six weeks after being bitten, while the other people bitten by the same dog are still alive and well, and have undergone no treatment. The scavenging of Cairo is now well done; all the streets are swept, and made roads are watered by carts every day, the lanes in the native quarters being watered by the inhabitants with goat skins. Until 1885, it was only the European quarters of Cairo which were kept clean. The inhabitants are allowed to deposit until 7 A.M. their dry refuse in the gutter, thence it is removed by sanitary carts, thus preventing all dustbin nuisance. This answers very well in a climate where the wind is never very high. The refuse is either burnt in the Turkish baths or deposited outside the town. The cesspools must now be emptied every six months; and every year, by an odourless pneumatic process, 30,000 tons of cesspool contents are taken away to the Desert, where they are converted into "poudrette," and sold to the fellaheen for cultivating their lands. Public opinion is becoming more and more discontented with the continuance of cesspools, and the Government has at last determined to summon a sanitary expert from England, to obtain from him a complete report of how the sewage question can be dealt with.

Infectious Diseases.

There were 8 deaths from small-pox registered in Cairo during the last week, and 1 in Alexandria, while the figures

for measles were 4 and 3 respectively. Small-pox is also reported from ten districts in Lower Egypt with 9 deaths, and measles from two districts with 5 deaths. Typhus and relapsing fevers remain in six districts, with 3 deaths for the week and 31 patients remaining in the temporary hospitals. The greatest number of typhus cases occurred at the Barrage, near Cairo, where 14,000 people lived in a village which normally held only 2000, the extra residents being fellaheen and their families, who had come to work there as navvies for the Government. The possibility of an epidemic was long ago foreseen by Mr. Reid, the English engineer in charge of the works. He was given jurisdiction over one tract of the district, and succeeded in preventing a single case of typhus from occurring in his people. An equally large tract was left under the control of the native Mudir of the province, with instructions to prevent overcrowding &c. Needless to say, he did nothing, and smouldering typhus for weeks, with over 100 sick, was the result. Six cases of typhus were discovered among the prisoners in Cairo last month, and one of the native doctors in charge of fever patients is now suffering from the disease. This prison, like many others in this country, is shamefully overcrowded, but fortunately typhus in Egypt shows no disposition to spread beyond its primary *locale*.

Cairo, June 14th.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

ELECTION OF PRESIDENT.

AT a quarterly meeting of the Council of the College, held on Thursday, the 11th inst., Messrs. Hulke, Heath, and Howse were introduced by the President as the new members of the Council, and, after the usual declaration, took their seats.

The minutes of the last Council were read and confirmed.

Mr. Marshall, as chairman of the Committee on the Lunacy Acts Amendment Bill, reported the proceedings of that committee, and laid before the Council a copy of the letter, dated the 24th ult., addressed to the Home Secretary on the subject of the Bill. This letter was entered on the minutes.

A letter of the 27th ult., from Mr. Arthur Milman, Registrar, was read, forwarding a copy of resolutions adopted by the Senate of the University of London on the 19th ult., relating to the appointment of a committee to consider the report of the University for London Commission. This was referred to a committee, to act jointly with the College of Physicians, and Messrs. Savory, Power, Hulke, and Sir William Mac Cormac, together with the President and Vice-Presidents, were appointed members of it.

A letter of the 9th inst., addressed to the President, from Mr. Frank Harris, Honorary Secretary to the Father Damien Memorial Fund, was read; the resolutions enclosed and adopted by the Executive of the Fund were referred to the President and Vice-Presidents to consider and report to the Council at the next meeting.

The report of the Committee on the Nomination of Professors and Lecturers was received and entered on the minutes. These are as follows:—Professors of Surgery and Pathology: William Henry Battle, John Langton, and Walter Pye. Professors of Comparative Anatomy and Physiology, &c.: William Watson Cheyne, Benjamin Thompson Lowne, and Charles Stewart. Lecturer on Anatomy and Physiology (Arris and Gale): William Hunter. Erasmus Wilson Lecturer: John Bland Sutton.

The Council proceeded to the election of President for the coming year, and Mr. Jonathan Hutchinson was elected; Messrs. Bryant and Croft being elected Vice-Presidents.

The next meeting of the Council will be held on Thursday, Aug. 1st.

THE BRITISH NURSES' ASSOCIATION.—The Lord Mayor has convened a meeting to be held at the Mansion House on the 17th inst., at 4 P.M., at which Princess Christian will be present, for the purpose of receiving information concerning the works and objects of the British Nurses' Association. Tickets of admission to the meeting can be obtained on application to the Secretary, 8, Oxford Circus Avenue, W.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board on the 4th inst. in the subjects indicated:—

Anatomy and Physiology.—A. L. Breen, W. Bubb, J. H. Rivers, and W. Selby, students of St. Bartholomew's Hospital; J. B. Cox, of St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; Frederick W. Edwards and F. O. Grant, of St. Thomas's Hospital; T. A. Goard, E. F. Mortimer, and R. McIver Paton, of Charing-cross Hospital; A. B. Duprey, of St. Mary's Hospital; R. H. Way, of University College; J. P. Lightfoot and G. Ramsay, of King's College.

Anatomy only.—A. Fardell, P. V. Hughes, and H. B. Wilmot, of King's College; S. H. Birt, of London Hospital; T. H. E. Meggs, of Westminster Hospital; H. J. L. Wales and J. W. Eastment, of Guy's Hospital; P. W. Keylel, of St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; and H. A. Kinsey, of University College and Mr. Cooke's School of Anatomy and Physiology.

Physiology only.—C. H. Chapman and J. H. Crawshaw, of University College; W. T. B. Donnelly, of Guy's Hospital; L. W. Bathurst and C. W. Grant, of St. Bartholomew's Hospital; R. D. Waghorn, of Westminster Hospital.

Passed on the 5th inst.:—

Anatomy and Physiology.—W. A. Haslam and R. L. Wason, of Guy's Hospital; W. R. Smith, H. Macnaughton Jones, and J. R. Russell, of King's College; H. E. Cooper, of St. Bartholomew's Hospital; F. S. Noble, of University College; C. C. Jeffrey, of Charing-cross Hospital.

Anatomy only.—H. B. Worthington, H. E. Sharman, E. P. H. Lulham, and M. Jenkins, of Guy's Hospital; S. H. Perry, of King's College; J. Morrison, W. R. Knightley, J. H. Griffiths, and H. T. Parker, of St. Bartholomew's Hospital; T. E. Smurthwaite and H. R. Power, of St. Mary's Hospital; H. D. Bishop, C. A. Wessels, J. S. Matthews, and W. Watkins, London Hospital; A. T. Wysard, of St. Thomas's Hospital; G. H. Procter, of University College.

Physiology only.—W. S. Langworthy and F. W. Gange, of University College; Isaac E. Owens and S. R. Nicholls, of London Hospital; E. J. T. Jones, of St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; R. F. Chance, C. H. Rock, R. Fawssett, and H. H. L. Patch, of St. Thomas's Hospital; E. S. Hemsted, of St. Mary's Hospital; F. Lewarne, R. J. Hillier, J. B. Collins, and H. E. Simpson, of St. Bartholomew's Hospital; G. H. Longton, of King's College; G. J. Rutherford, of Middlesex Hospital; F. B. Rockstro, of Charing-cross Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations for the diploma, and having obtained a medical qualification, were at the quarterly meeting of the Council on the 11th inst. admitted Members of the College:

Boning, Arthur Wilson, L.S.A., Elham, Canterbury.
Le Riche, Philip John, L.S.A., University College Hospital.
Stephens, Daniel Robert Porritt, M.B.Cantab., St. Barthol. Hosp.

UNIVERSITY OF OXFORD.—At a congregation held on the 6th inst. the degrees of M.B. and B.Ch. were conferred on the following gentleman:—

Alfred Evans, M.A., of Exeter College and London Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—The following have been admitted Fellows of the College:—

Robert John Montgomery, John Myles, and Graves Stoker.

THE CROYDON CORONERSHIP.—Mr. Thomas Jackson, L.R.C.P. Edin., M.R.C.S. Eng., L.S.A., &c., of Thornton Heath, has been elected coroner for the county and borough of Croydon.

THE CARDIFF INFIRMARY.—The first Cinderella dance in aid of this institution was held in the Town Hall, Cardiff, on the 30th of April, and yielded the sum of £60 to the funds of the infirmary.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—The annual distribution of prizes will take place on Thursday next, the 18th, at 4 P.M., when Sir J. Crichton Browne, M.D., F.R.S., Lord Chancellor's Visitor, will preside.

THE FRENCH OPHTHALMOLOGICAL SOCIETY.—The meetings of this Society will be held in Paris at the Hôtel des Sociétés Savantes, Rue des Poitevins, on Aug. 8th and following days. The attendance of those interested in the subject of ophthalmology is cordially invited.

PASTEUR INSTITUTE.—The Lord Mayor will be glad to receive at the Mansion House donations towards making a suitable contribution to the "Institut Pasteur" in Paris, where over 200 of our fellow-countrymen have been gratuitously treated by M. Pasteur and his staff, and towards providing for the expenses of British subjects bitten by rabid animals, who are unable to pay, without help, the cost of a journey to Paris.

OPEN SPACES FOR THE PUBLIC.—At the weekly meeting of the London County Council, on Tuesday, the 9th inst., a recommendation of the Parks and Open Spaces Committee was adopted, to the effect that the Council contribute half the cost, not exceeding £61,000, towards the sum required for the purchase of Brockwell Park for the use of the public.

DR. CHAVASSE AND THE COTTAGE HOSPITAL, BROMSGROVE.—Dr. Chavasse, at a public meeting, held in this town on the 1st inst., for promoting the erection of a new cottage hospital for the town and neighbourhood, stated that Mrs. Chavasse and himself would, if the committee approved the proposal, build a male ward for six beds and furnish it, when the site was procured, intimating that they would like the architect to be a Bromsgrove man, and the ward to be named the "Arthur Ryland Ward."

VICTORIA HOSPITAL, SWINDON.—Mr. H. Kinneir presided at the first annual meeting of this institution, held at New Swindon on the 6th inst. The hospital was opened for the reception of patients on Sept. 29th last, and twenty-four patients had since been admitted. The subscriptions to the management fund amounted to £430 2*s.* 1*d.*, and the expenditure to £291 8*s.* 6*d.*, leaving a surplus of £135 13*s.* 7*d.* The building fund account shows a total outlay of £1960 8*s.* 7*d.*, and receipts amounting to £1770 0*s.* 10*d.*, the deficit, £190 7*s.* 9*d.*, being due to the treasurer.

THE JOHN HOWARD CENTENARY.—The Russian Government have decided to give a prize of £80 and a large gold medal for the best work on the subject of John Howard in the History of Prison Reform, as a mark of respect for the eminent British philanthropist, who died at Kherson in South Russia in 1790. The essays, written in French or Russian, or accompanied by a French translation, are to be sent to St. Petersburg, when they will be judged by a select committee during the convocation of the International Prison Congress next year.

PRESENTATIONS.—Mr. Thomas Sellar, M.B., C.M., of Aberlour, has been presented by his friends in Aberlour, Knockando, and surrounding districts, on the occasion of his marriage, with a silver salver and a purse of gold.—Mr. John Cockle, M.D. Aberd., F.R.C.P.Lond., of Suffolk-street, Pall Mall, London, was last week presented by the Treasurer, Trustees, and Board of Management of the Warehousemen, Clerks, and Drapers' Schools with a silver salver, as an appreciation of his valuable services as Honorary Physician during a period of thirty-five years.

METROPOLITAN CONVALESCENT INSTITUTION.—The recent half-yearly report of this institution, at Walton-on-Thames, Kingston-hill, and Bexhill-on-Sea, states that 2451 convalescent patients had been received in the three homes during the past six months, on the recommendation of subscribers, entirely free of charge, being the largest number admitted in the corresponding period, the majority of whom were thoroughly restored to health after a residence of three weeks. In the Walton and Kingston-hill homes, in the period under review, the admissions show an increase of 359. In the three homes 600 beds are maintained.

HOSPITAL DONATION BY THE SHAH.—At the commencement of the week the Shah sent his Grand Vizier and other high Persian officials, who were accompanied by several of the British *attachés*, on a visit of inspection to St. George's Hospital. There Amin Sultan left a donation of 200 imperials (Russian money) in the name of the Shah. He also, by instruction, asked after the health of the inmates, and said that his Imperial Majesty deeply regretted he was unable to call and see them personally. Other institutions were also visited, and several donations were sent to various charities.

LEPROSY. — At the Balloon Society's meeting last Friday at St. James's Hall, Surgeon-General Sir William Moore delivered a lecture on Leprosy. He said that he spoke on this painful subject after thirty years' medical experience in India. So far as this country was concerned, there had always been a certain number of lepers in England, and there would probably be more as communication with the East increased. Our generally excellent sanitary arrangements were calculated to oppose the spread of any disease which required communication of the active germs by contact. Referring to the outcry which had been raised, the lecturer said that it was quite wrong to suppose the Government had done nothing with respect to India, instancing the leper asylums in the Bombay Presidency. There were, however, many difficulties with regard to the isolation of lepers in India. The great safeguard was the spread of civilisation and sanitation.

DONATIONS. — Grants have been made by the Rathmines Commissioners to the following:—Meath Hospital, Dublin, £100; Cork-street Fever Hospital, £75; City of Dublin Hospital, £36; Hospice for the Dying, £25; Mercer's Hospital, £20.

SOCIETY FOR THE STUDY OF INEBRIETY.—At the Medical Society's rooms, on the 2nd inst., Dr. Norman Kerr, President, in the chair, the Chevalier Max Proskowetz de Proskow-Marstoff, President of the Austrian Society for the Study of Inebriety, gave an account of a tour through European Russia and Persia. He drew attention to the great increase in the consumption of spirits by their attractive display at the railway station bars. The proceedings concluded with a vote of congratulation to one of the vice-presidents, Sir George Hornidge Porter, on the baronetcy recently conferred upon him.

THE LANCASHIRE AND CHESHIRE BRANCH OF THE BRITISH MEDICAL ASSOCIATION.—The 53rd annual meeting of this branch of the Association was held at the Winter Gardens, Blackpool, on the 3rd inst., Dr. J. W. Watkins (the retiring President) in the chair, who introduced the newly elected President, Dr. Davidson. There was a large attendance. After the delivery of the presidential address Dr. Shuttleworth called attention to some of the provisions of the Lunacy Acts Amendment Bill, particularly those affecting the general practitioner. A discussion ensued, which was followed by papers by Mr. Bishop on Congenital Club-foot and its treatment; Mr. Leach, on the Uses of Nitrous Ether; Dr. A. Hill Griffith on a case of Sympathetic Disease after removal of the Injured Eye; Dr. Wallace, on Vaginal Hysterotomy and Enucleation of Fibrous Growths, and Hysterectomy after Laparotomy by Modified Enucleation (specimens); Mr. Sinclair, on Hypertrophy of the Female Breast; and Dr. Banks, on Intubation of the Œsophagus.

MEDICAL NOTES IN PARLIAMENT.

Indecent Advertisements Bill.

IN the House of Lords on Tuesday, the 9th inst., the Earl of Meath moved that the Commons' amendment to this Bill be considered. The amendment was only of a verbal character, but tended to make the meaning clearer.—The Earl of Wemyss thought the Bill was very stringent legislation. Any person who exhibited what was called a picture of an indecent nature was made liable to summary conviction, and under Clause 5 a policeman without warrant might arrest a person so exhibiting. A prudish policeman might thus bring a person before a magistrate for displaying a representation of the Venus de Medici.—The Commons' amendment was agreed to.

Desertion of Children.

In the House of Commons on Thursday, the 4th inst., Mr. Ritchie, in reply to Mr. Salt, stated that he hoped to be able to introduce during the present Session a Bill giving to Boards of Guardians increased powers with regard to control over children who, in consequence of desertion by their parents, had become chargeable to the rates.

Lighter Summer Clothing for the Police.

On Friday, the 5th inst., Mr. Matthews, in reply to Mr. H. Vincent, quoted the opinion of Sir Charles Warren that in this climate there was more danger from wet and cold than from excessive heat. He would not, therefore, feel justified under the extremely variable conditions of our climate in incurring the great expense of providing the police with summer clothing for regular wear.

Local Government (Scotland) Bill.

On Monday, the 8th, the consideration of this Bill in Committee was resumed. This Bill will confer upon the new County Councils full powers as to sanitary matters &c.—Colonel Malcolm moved an amendment giving the County Council power to make provision for the enlargement, maintenance, management, and otherwise dealing with asylums for lunatics.—The Lord Advocate opposed the amendment on the ground that it really effected a change in the lunacy law, and the amendment was withdrawn.—On Clause 17, Mr. Caldwell moved an amendment to give the County Council greater power of control over officers appointed to carry out the provisions of the Public Health Act.—The Lord Advocate pointed out that when the Public Health Act was passed it was thought advisable that officers appointed to discharge often unpopular duties should not be removable except with the consent of the Board of Supervision. He hoped the Committee would not take a step which would place the administration of the Act under a new danger by introducing an element of popularity, and excluding the control of an impartial authority free from local prejudice.—Sir G. Campbell said the County Council would not be master in its own house if sanitary officers could appeal to the Board of Supervision. A district council might be subordinate to the County Council; but the latter at least should be independent.—The Lord Advocate said the formal amendment did not raise the question that was being discussed, which he was willing to consider with the view of vesting the

powers of the Board of Supervision in the County Council, if that were possible; but the promotion of the public health must be the paramount consideration, and ought not to be sacrificed to any theory of popular control.—The committee divided. For the amendment, 99; against, 160; majority, 61. The amendment was therefore negatived. Some verbal amendments were adopted, and the clause was agreed to.

Cruelty to Children (Prevention) Bill.

On Wednesday, the 10th, this Bill as amended was considered. Mr. Jennings moved an amendment to remove from the Bill the prohibition of the employment of children under ten years of age in theatres. He denied that children were cruelly treated in theatres; on the contrary, they took the greatest pleasure in their parts, besides which the money they earned often kept the parents off the rates.—Major Rasch, Mr. Labouchere, the Attorney-General, and others supported the amendment, whilst Mr. S. Smith, Mr. Courtney, Mr. Howell, and others offered it their most strenuous opposition. After an exhaustive debate the amendment was rejected by 188 to 139.

Vaccination in Wales.

On Thursday, the 11th inst., Mr. Ritchie, in reply to Mr. Alfred Thomas, said he could only repeat the answer which he gave to a similar question put last year, that there is in Wales no vaccination station at which certificates of qualification in vaccination can be obtained, and the Local Government Board are not aware that any serious inconvenience has been occasioned thereby. The College of Physicians, the College of Surgeons, and the Society of Apothecaries now require such a certificate from every candidate for their diploma or licence, and hence most medical men now obtain their certificates before entering on practice. It is not usual to appoint examiners to grant these certificates in towns in which there is no school of medicine. If a medical school should be established in Wales, he would be prepared to consider the question of appointing a person who could give these certificates in Wales.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BERRY, F. H., M.D.Lond., M.B., M.R.C.S., has been appointed Medical Superintendent to the Isolation Hospital, Watford.

BOWMAKER, EDWARD, M.B., B.S.Durh., has been appointed Medical Officer of Sunderland Rural District.

BRAINE, C. CARTER, M.R.C.S., L.R.C.P., has been appointed Assistant Anæsthetist to the Charing-cross Hospital.

GILBERT, H. P., L.R.C.P.Edin., M.R.C.S., has been appointed Medical Officer of the 11th District, Wisbeach Union.

GORDON, BRYCE, L.R.C.P.Lond., M.R.C.S., has been appointed Medical Officer of the First District (Division 2), Halstead Union.

HARTLEY, A. C., M.B., C.M., has been appointed Resident Medical Officer of the Chalmers Hospital, Edinburgh.

HAWKINS, CÆSAR FREDERICK, M.R.C.S., L.S.A. Lond., has been appointed District Medical Officer and Public Vaccinator for the North Petherton District of the Bridgwater Union, vice W. J. Todd, M.R.C.S., L.R.C.P. Lond., deceased.

HOLDEN, J. S., M.D.Q.Univ. Irel., L.R.C.S.Edin., has been appointed Medical Officer of Sudbury Union, 3rd District.

INGLE, A. C., B.A., M.B., B.C.Camb., M.R.C.S., L.S.A., has been appointed Medical Officer to the Cambridge Union.

LANKESTER, H. H., M.D., M.B., M.R.C.S., L.S.A., has been appointed a Physician to the Chelsea, Brompton, and Belgrave Dispensary, Sloane-square, vice Cox, resigned.

LARKIN, F. G., L.R.C.P., L.M.Edin., M.R.C.S., has been appointed Medical Officer to the Royal Naval School, Fairey Hall, West Chislehurst Park, Kent.

LLOYD, RICKARD WM., M.R.C.S., has been appointed Anæsthetist to the Dental School of Guy's Hospital.

PARKES, LOUIS C., M.D., D.P.H.Lond., has been appointed Assistant Professor of Hygiene at University College, London.

POSTLETHWAITE, F., M.R.C.S., L.S.A., has been appointed Medical Officer of the High District, Longtown Union.

SHEPPARD, CHARLES EDWARD, M.D. Lond., F.R.C.S. Eng., has been appointed Anæsthetist to the Dental School of Guy's Hospital.

SHEPPARD, E. J., L.R.C.P., L.R.C.S.Edin., has been appointed Medical Officer of the 1st District, Barton Regis Union.

TINLEY, THOMAS, M.D.Durh., M.R.C.P., L.F.P.S.Glasg., has been appointed Medical Officer of Health, Whitby Union District, and No. 1 Division Whitby Rural District.

WELLS, G. LEE, M.C., B.S.Lond., F.R.C.S., has been appointed Honorary Demonstrator of Anatomy to the Yorkshire College, Leeds.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Assistant Physician.

CLAYTON HOSPITAL AND GENERAL DISPENSARY, Wakefield.—House Surgeon. Salary £120 per annum, with residence at the hospital, attendance, coals, and gas.

CUMBERLAND INFIRMARY, Carlisle.—House Surgeon and Assistant House Surgeon. House Surgeon's salary £70 per annum. Assistant House Surgeon's salary £40 per annum. Board, lodging, and washing provided in each case.

DEACONESSES' INSTITUTION AND HOSPITAL, Tottenham. — Resident Junior House Surgeon. Salary £25 per annum.

EYE INFIRMARY, Wolverhampton.—Resident Assistant for not less than six months, and not more than twelve months. Terms: Rooms, with board and washing.

GENERAL HOSPITAL, Birmingham.—Assistant House Surgeon for six months. No salary, but residence, board, and washing provided.

HOCKLEY PROVIDENT DISPENSARY.—Medical Officer. Salary £250 per annum, with residence, coal, and gas.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.).—Clinical Assistants in both the Out-patient and In-patient Departments.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £50 per annum, with board and lodging.

NORFOLK AND NORWICH HOSPITAL, Norwich.—Assistant to House Surgeon. No salary, but board, lodging, and washing provided.

NORTHUMBERLAND COUNTY ASYLUM.—Clinical Assistant. No salary, but board and residence provided.

POOLE FRIENDLY SOCIETIES' MEDICAL ASSOCIATION, Market-street, Poole.—Assistant. Salary £80, and part midwifery fees.

ROYAL ALBERT HOSPITAL, Devonport.—A Vacancy on the Honorary Surgical Staff of the Hospital.

ROYAL BERKS HOSPITAL, Reading.—Assistant House Surgeon. Salary £40 per annum, with board and lodging.

ROYAL COLLEGE OF PHYSICIANS, London, Pall Mall East.—Milroy Lecturer.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London.—House Physician for six months. Salary at the rate of £50 per annum, with board and lodging.

RUBERY HILL ASYLUM, Bromsgrove, Worcestershire.—Clinical Assistant. No salary, but board and residence provided.

ST. MARK'S HOSPITAL FOR FISTULA, &c., City-road, E.C.—House Surgeon. Salary £50, with board and residence in the hospital.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY, Whitehaven.—House Surgeon. Salary £120 per year, and £30 per year for dispensing, with furnished apartments and attendance.

WINDSOR ROYAL INFIRMARY.—Dispenser. Salary commencing at £35, with full board and lodging.

WIRRAL HOSPITAL AND DISPENSARY FOR SICK CHILDREN, 25, Lord-street, Liverpool.—Honorary Acting Medical Officer.

X. Y. Z., care of Messrs. Wells and Co., 40, Market-place, Salisbury.—Medical Officer in a Hydropathic Establishment in the West of England

Births, Marriages, and Deaths.

BIRTHS.

BADDELEY.—On July 1st, at Weston House, Newport, Salop, the wife of C. E. Baddeley, M.B. Lond., of a daughter.

BIDEN.—On July 3rd, at Wyndham-square, Plymouth, the wife of Edward J. Biden, Surgeon R.N., of a daughter.

GURDON.—On May 17th, at Bohemia, Middle Brighton, Melbourne, the wife of Dr. E. J. Gurdon, of a son.

HABERSHON.—On July 8th, at Upper Wimpole-street, W., the wife of S. Herbert Habershon, M.D., of a son.

LIDDERDALE.—On July 6th, at Porchester-square, W., the wife of Robert Lidderdale, M.D., of a daughter.

MACKENZIE.—On June 29th, at Lockwood, Huddersfield, the wife of Frederick L. Mackenzie, M.B., of a son.

MARRIAGES.

BRYCE—WILSON.—On July 4th, at St. Mary's Cathedral, Edinburgh, Thomas H. Bryce, M.A., M.B., London-terrace, Kelvinside, Glasgow, eldest surviving son of Wm. Bryce, M.D., Edinburgh, to Mary Russell Laudale, eldest daughter of Geo. Wilson (of Dalmarnock), Murrayfield House, Midlothian.

COWEN—DAWSON.—On July 3rd, at St. Jude's, Southsea, William Amherst Cowen, Army Medical Staff, to Annie Kemp, youngest daughter of Major Dawson, J.P. (late Suffolk Regiment), of Nohaville, West Meath, and Suffolk Lodge, Southsea.

ORMEROD—EDWARDS.—On July 10th, at the Parish Church, Stanton Lacy, Salop, Edward Booth Ormerod, M.R.C.S., of Munslow, Craven Arms, Salop, fourth son of the late George Ormerod, of South Australia, to Amelia Jane, youngest daughter of the late Richard Edwards, of Stanton Lacy, Salop.

SYMONDS—SHAW.—On July 10th, at St. Mary Abbot's, by the Rev. Main S. A. Walrond, M.A., Rector of St. Lawrence Jewry, Charters James Symonds, of Weymouth-street, Portland-place, to Fanny Marie, youngest daughter of Major-General David Shaw, Madras Staff Corps. No cards. At home Wednesdays, after Sept. 1st.

WHITELOCKE—REID.—On July 3rd, at the Church of St. Nicholas, Brighton, Richard Henry Anglin Whitelocke, M.B., M.R.C.S., of Banbury-road, Oxford, third surviving son of the late Hugh Anthony Whitelocke, Esq., of Moreland and Bulstrode Park, Westmoreland, Jamaica, to Barbara Henry, elder daughter of George Lowe Reid, Esq., of Montpellier-crescent, Brighton.

WIGMORE—WATT.—On July 3rd, at St. Barnabas, Liverpool, Frederic Henry Wigmore, of Macclesfield, M.B.Cantab., to Amy Grant Watt, of Montreal.

DEATHS.

BREWER.—On July 6th, at 92, Clarence-road, Lower Clapton, Alexander Brewer, M.R.C.S.E., fifth son of the late John Brewer, of Caira, in the County of Monmouth, aged 82.

ELAM.—On July 9th, at his residence, Harley-street, W., Charles Elam, M.D., F.R.C.P., aged 65.

LLOYD.—On July 5th, at Bryntirion, Berkhamsted, George Lloyd, M.D., F.G.S., aged 85.

WILKINSON.—On July 6th, at Bognor, G. F. E. Wilkinson, L.R.C.P.Edin., of Wych Elms, Sydenham-park, S.E.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births Marriages, and Deaths.

BOOKS ETC. RECEIVED.

CASSELL & COMPANY, London.

The Secret of the Lamas: a Tale of Thibet. 1889. pp. 235.
The Admirable Lady Biddy Fane. By Frank Barrett. pp. 352.
Royal Academy Pictures. Illustrating the 121st Exhibition of the Royal Academy. 1889.

CHAPMAN & HALL, London.

Austrian Health Resorts throughout the year. By W. Fraser Rae. Reprinted, by permission, from *The Times*. Second and enlarged edition. 1889. pp. 318.

CLARK, C. J., Lincoln's-inn-fields, London.

The Dictionary of Medical Specialists. Being a Classified List of London Practitioners who chiefly attend to Special Departments of Medicine and Surgery. Edited by W. P. W. Phillimore, M.A., B.C.L. 1889. pp. 176.

DAVIS, F. A., Philadelphia, and 139, Oxford-street, London.

American Resorts. With Notes upon their Climate. By B. W. James, A.M., M.D. 1889. pp. 285.
Annual of the Universal Medical Sciences. Edited by C. E. Sajous, M.D., and Seventy Associate Editors. Illustrated. Vols. I. to V. Issue of 1889.

GURNEY & JACKSON, Paternoster-row, London, E.C.

Chemistry, General, Medical, and Pharmaceutical. Including the Chemistry of the British Pharmacopœia. By John Attfield, F.R.S. 13th Edition. 1889. pp. 861.

IMPERIAL PRESS, Jubbulpore.

The Tropical Diseases of the Horse. By R. W. Burke, M.R.C.V.S. Second Edition. 1888. pp. 158.

LONGMANS, GREEN, & Co., Paternoster-row, London.

The Diseases of Children, Medical and Surgical. By H. Ashby, M.D.Lond., M.R.C.P., and G. A. Wright, B.A., M.B.Oxon., F.R.C.S.Eng. 1889. pp. 681. Price 1 guinea.

MAWER, W., Essex-street, Strand, London.

Life-Lore: a Monthly Magazine of Biology. By W. Mawer, F.G.S. Vol. I. 1889. pp. 296. Price 6d.

NISBET, JAS., & Co., Berners-street, London, W.

A Dream of the North Sea. By James Runciman. 1889. pp. 297. Price 5s.

RENSHAW, HENRY, 356, Strand, London, W.C.

An Introduction to Pathology and Morbid Anatomy. By T. H. Green, M.D. Seventh Edition, revised and enlarged by Stanley Boyd, M.B., B.S.Lond., F.R.C.S. Illustrated by 167 Engravings. 1889. pp. 615.

SMITH, ELDER, & Co., Waterloo-place, London.

Dictionary of National Biography. Edited by Leslie Stephen. Vol XIX. Finch—Forman. 1889. pp. 447.

SUPERINTENDENT OF GOVERNMENT PRINTING, Calcutta, India.

Scientific Memoirs by Medical Officers of the Army of India. Edited by Sir Benjamin Simpson, M.D., K.C.I.E., Surgeon-General with the Government of India. Part 4. 1889. Price 2 rupees. pp. 72.

TRÜBNER & Co., Ludgate-hill, London.

All about Pasadena and its Vicinity, its Climate, Missions, Trials, and Canons, Fruit, Flowers, and Game. By C. F. Holder. 1889. pp. 141. Price 2s. 6d.

TIEMANN & Co., Park-row, New York.

The American Armamentarium Chirurgicum. By G. Tiemann & Co. pp. 846.

Die ersten zehn Jahre der Myringoplastik nebst Angaben verbesserter Methoden zur Heilung von Alten Löchern im Trommelfell; von Prof. Dr. E. Berthold (August Hirschwald, Berlin, 1889).—Index Medicus: Authors and Subjects; vol. XI., No. 5; May, 1889 (Trübner & Co., and Lewis, London).—Wilson's Legal Handy Books: the Law of Master and Servant, Employer and Employed; by Jas. W. Smith, Barrister-at-Law; new and revised edition, price 1s. 6d. (Effingham Wilson & Co., London, 1889).—The Stockbroker's Handbook; by E. E. Kennedy; third edition, revised, price 1s. (Effingham Wilson & Co., London, 1889).—The Merchant's Clerk; the Operations of the Counting-house; by John Pearce; 16th edition, price 2s. (Effingham Wilson & Co., London, 1889).—Electricity: Theoretically and practically considered by the Aid of Thermo-Electricity; by Arthur Rust (E. & F. N. Spon, London).—Concurrent Cow-pox and Small-pox: a *Résumé* of the cases of Cow-pox and Small-pox present together in the same Person, as recorded in the Government Report on the Recent Epidemic of Small-pox in Sheffield; by G. S. Gibbs (W. Dresser, Darlington, 1889).—Edinburgh Medical School Calendar and Guide to Students, 1889-90 (E. & S. Livingstone, Edinburgh. Price 1s. 6d.).—Is Bad Sight on the Increase? The Philosophy of Sight; by A. Fournet (Swan Sonnenschein & Co., London, 1889. Price 1s.).—The American Journal of the Medical Sciences, published monthly, edited by J. Minis Hays, A.M., M.D.; vol. XCVIII., No. 1; July, 1889, No. 207 (Lea Brothers & Co., Philadelphia).—Bulletins de la Société Anatomique de Paris, 64e Année, 1889. 5me Série, tome III. (G. Steinheil, Paris, 1889).—Répertoire de Pharmacie et Archives de Pharmacie Réunis. Troisième Série, tome premier; No. 7, 10 Juillet, 1889 (45, Rue Turenne, Paris). Magazines for July: Good Words, Sunday Magazine, Leisure Hour, Sunday at Home, Boy's Own Paper, Girl's Own Paper, with "Rose Mary" (Summer Number), Scribner's.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 11th, 1889.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 a.m.
July 5	30·18	E.	65	60	119	81	57	..	Hazy
,, 6	30·11	N.E.	67	57	113	83	57	..	Bright
,, 7	29·80	S.W.	64	61	109	74	60	..	Cloudy
,, 8	29·78	S.E.	59	57	79	65	57	..	Overcast
,, 9	29·84	S.W.	64	60	115	73	57	·13	Cloudy
,, 10	29·72	S.W.	64	61	98	74	60	·19	Raining
,, 11	29·99	W.	64	58	121	76	55	·06	Bright

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

LEPROSY IN NORTH BRITAIN.

G. W. H.—Leprosy was not uncommon in Scotland in the fourteenth century. King Robert the Bruce is believed to have died of it, June 7th, 1329 (see Tytler's History, vol. i., p. 368). Liberton, the parish in Midlothian lying immediately to the south of Edinburgh, derives its name, according to the antiquary and philologist George Chalmers, from having been an asylum for sufferers from the disease—"the Lepers' town."

Mr. Richard Hingston.—1. Our correspondent will find a reference to the Salisbury treatment in THE LANCET of June 15th, page 1193.—2. Royal Hospital for Incurables, West Hill, Putney Heath, S.W. (Office, 106, Queen Victoria-street, E.C.); British Home for Incurables, 380, Clapham-road, S.W.; Home for Incurable and Infirm Women, 10, Great Ormond-street, W.C.

Hygiene.—Wilson's Handbook of Hygiene, published by Churchills, London; Willoughby's Principles of Hygiene, published by William Collins and Son, London.

Exact should consult the Medical Register. We do not recommend practitioners.

A CASE OF FUNCTIONAL DISEASE.

To the Editors of THE LANCET.

SIRS,—The following case, affording as it does a remarkable example of the influence of the mind on the body, will doubtless interest your readers.

D. S——, an intelligent-looking brunette, of a bilious temperament, aged twelve years in March last, had always enjoyed good health up to about a twelvemonth since, when slight pain and indications of weakness in the back and ankles showed themselves in walking, but not sufficient to disable her until December last, when rheumatic symptoms in the back and legs, accompanied with high temperature, the result of a severe chill, affected her. The symptoms yielded to a great degree under treatment, but she continued to walk slowly and slightly lamely. On March 6th I was requested to visit her in consequence of severe pain in the back, sides, and legs. She was unable to bear the pressure of her clothes or be touched, or use her legs. Again the severity of the symptoms yielded to treatment during the following week, with the exception of the lower extremities, which becoming more and more useless, she was removed to the Devon and Exeter Hospital. After eight weeks' treatment she was discharged slightly benefitted, but unable to lift her feet, and walked with a "shuffling" movement. From that time to last Tuesday (June 25th) she has been unable to stand without one or two persons supporting her, and the loss of power increased and extended to the arms; she was also obliged to be fed at times. Dr. Hughlings Jackson kindly responded to my wish, and had

arranged for her early admission into the National Hospital for Paralysis and Epilepsy. She usually slept well, but on Monday night last was very restless, and the following note received from her mother the day following will best explain what followed the restless night.

"June 25th.

"DEAR SIR,—I know you will be greatly surprised at what I am going to write, it really seems too good to be true. This morning, about 8 30, I was going on with my usual work when I fancied I heard D—— calling, and, on going to the foot of the stairs, I was greatly astonished to see her walking down stairs, and looking so terrified and in such a bath of perspiration that she quite frightened me. She called out 'Quickly, quickly, bolt the door.' I found she was walking in her sleep, and could not believe me when I told her, after leading her up stairs, that she had walked down and up again. A few moments afterwards, being scarcely conscious, she tried to stand, but could not, and she cried bitterly and laid down in bed again; but an hour afterwards she got out of bed and found the power to walk had come back again and she has been able to walk all the day. I have just walked with her, by her wish, to the Vicarage (about the eighth of a mile), where she has spent, by the kindness of the vicar, every afternoon lately, by driving her in an invalid carriage. Both ourselves and D—— are anxious you should see her as soon as convenient."

It appears she dreamt that she was left in a cart in the highway, and that a herd of bullocks attacked her, that she jumped from the cart and entered a house close by, and, reaching the top of the stairs, remembered she had omitted to bolt the door, and was descending the stairs to do so when met by her mother.

My diagnosis of the attack has been throughout "spinal paralysis complicated with rheumatism"; but the special condition it was due to was far from intelligible, but everything pointed to a *functional* rather than organic cause, and the sequel confirms the correctness of the diagnosis in this particular.

An analogous case of "shock" occurred in my own family in this wise. Sixteen years ago my youngest daughter, then eight years of age, of similar appearance, complexion, and temperament to the above-named, and in sound health, retired to bed. Twenty minutes after she rushed into a brother's room crying and exclaiming "Those horrid 'popes,' I wish there were no more of them; I have been dreaming about them, and I can't hear, and I want papa to syringe my ears." She was coaxed back to bed by her brother, but after a few minutes she ran down stairs to her mother, crying bitterly, and saying she had been dreaming about the "popes," and that she was deaf, and should never hear again. She was again put to bed, and in the morning she proved to be deaf, and has remained so from that hour to this. She was seen soon afterwards by Sir James Paget, Mr. Thomas Smith, and subsequently by Mr. Cumberbatch.

For two or three years the rioting and damage practised in this neighbourhood on Guy Fawkes day had struck terror into the minds of children, and it was within a few days of another anniversary when the above took place, and the subject was one of daily comment.

During the past half century much of the ambiguity in connexion with nervous disease has been swept away, and physiology has wonderfully advanced our knowledge of its pathology and etiology, but even now, who of us will be bold enough to attempt to detail with accuracy the physiological action of "shock," or, in other words, the influence produced on the nervous system by fright as exemplified in such cases as the foregoing? I am, Sirs, yours faithfully,

Sidmouth, July 1st, 1889. THOS. H. S. PULLIN, M.D.

P.S.—To-day (a week since the dream) D. S—— has visited me, and walked in my garden for half an hour without the slightest pain, difficulty, or gait, to all appearances in good health.

A MORIBUND UNIVERSITY.

ITALY suffers from academic anæmia, none of her seats of learning, in the medical faculty *par excellence*, being adequately endowed. Ferrara has one of these—the "Studio Pubblico"—which has enjoyed an intermittent fame as a school of medicine and jurisprudence, but is now chiefly known for its fine library of 90,000 volumes and 1000 MSS. Its Communal Council has just petitioned the Government to be relieved of the obligation to subsidise this school, and the prayer, which is sure to be granted, sounds the death-knell of that seat of learning. Other moribund universities throughout the peninsula are expected to follow suit, so as to improve the quality and efficiency of the Bolognese, Roman, and Neapolitan ones, which, in the Italian academic world, exemplify the survival of the fittest.

Geo. Veitch Gilray (Orkney).—The Handbook of the St. John Ambulance Association; Esmarch's Lectures, or those of Wetherly. The examination for the Proficiency Certificate of Acting Surgeons of Volunteer Corps consists of one paper containing from twelve to sixteen questions, four hours being allowed to write and answer questions. The Army Medical regulations relating to "The Soldier" and Parkes' Hygiene are the books to read for the examination. Alfred Lingard, Esq., St. Ermin's Mansions, Westminster, S.W., is hon. secretary of the Volunteer Ambulance Department.

D. J. R.—The dummy teat is certainly injurious, as, even if kept clean (which is rare), it is a constant irritant to the mouth, and to the immature salivary glands. Besides this, it encourages the child to suck in air, and is thus a fertile source of dyspepsia.

Musicus.—We do not recommend practitioners.

THE LITERATURE OF "HYPNOTISM."

THE present year has witnessed the publication of three contributions to the department of physio-psychological research known as "hypnotism." "Gedanken-Uebertragung: Vortrag, gehalten in der Akademischen Gesellschaft zu Freiburg i. B., von Dr. Hugo Münsterberg, Privat-docenten der Philosophie an der Universität zu Freiburg" (Thought-Transference: a lecture delivered before the Academic Society of Freiburg in Bavaria, by Dr. Hugo Münsterberg, Private-Reader in Philosophy to Freiburg University), is the first of these. The second is the treatise of Dr. Albert Moll of Berlin, entitled "Der Hypnotismus." A table of contents and a full list of authors treating of the subject enhance the usefulness of the work. The third publication is that of Dr. H. Beaunis, Professor of Physiology in the Medical School of Nancy. This has been thought worthy of translation into German, a task which has been ably accomplished, in co-operation with the author, by Dr. Ludwig Frey. Indeed, this German edition (Deuticke: Leipsic and Vienna, 1889) presents the book in its most convenient form. Those of our readers who are interested in the subject could not do better than consult this treatise, of which the full title is: "Der Künstlich hervorgerufene Somnambulismus: Physiologische und Psychologische Studien von H. Beaunis, Professor der Physiologie der Medicinischen Facultät in Nancy. Autorisirte deutsche Ausgabe, von Dr. Ludwig Frey. Mit 4 Abbildungen" (Artificially-evoked Somnambulism: Physiological and Psychological Studies by H. Beaunis, Professor of Physiology to the Medical Faculty in Nancy. Authorised German edition, by Dr. Ludwig Frey. With four pictorial illustrations).

Mr. H. W. Salmon.—The pamphlet is published by Messrs. Gilbert and Rivington, St. John's House, Clerkenwell-road, E.C.

MEDICAL ADVICE FREE: MEDICINE 2D. PER BOTTLE!"

To the Editors of THE LANCET.

SIRS,—I see that in your last issue you publish a handbill which has been very largely distributed in this neighbourhood (Clapham) for a considerable time past, this being evidently merely a fresh batch of the same advertisement. There can be, as far as I know, no possible excuse for the distribution of such circulars amongst other medical men's patients, and to advertise such terms for medical services, especially for midwifery, is degrading to the whole profession.

I am, Sirs, yours truly,

July 8th, 1889. TÆNAX.

To the Editors of THE LANCET.

SIRS,—The disgraceful circular published by you last week is being distributed broadcast in the Clapham and Stockwell district. The culprit in this instance is a "lady doctor." Under the guise of charity she has repeatedly distributed these handbills all over the district, to the immediate detriment of her fellow practitioners, who have individually suffered in consequence to a more or less extent. The College of Physicians in Ireland have been written to on the subject, but have taken no action, as far as one can judge, the bills being still distributed. The price advertised is ridiculous—2*d.* per bottle; but this is only a catchpenny, as by this touting it is hoped to obtain other patients. Every doctor in the neighbourhood is up in arms in the matter, and I write to you to know what can be done. At the last meeting of the Medical Council a dentist had his name erased for advertising, and yet a member of the medical profession goes scot-free. I think it is only just that gross cases of advertisement, as this one certainly is, should be shown up in our leading medical journal. I might just add, in conclusion, that I write this letter on behalf of several of my fellow practitioners, and I know as a fact that all of us are feeling in many ways this public disgrace to the profession. I am, Sirs, yours faithfully,

July 3rd, 1889. PRO BONO PUBLICO.

*** The above are two of many letters on the same subject. Our correspondents must make their representations to the King and Queen's College of Physicians in Ireland. To do lady practitioners justice, this is, we think, the first case of the kind on their part. But it ought to be immediately disapproved by them, and by the College from which the lady has her qualification. To call such touting "charity" is the greatest abuse of language.—ED. L.

Dr. J. B. Hunter is thanked for the offer of his communication, which, however, is not quite suited to our columns. It is more fitted for pamphlet form. Besides, we must admit, its proposals appear to us unpractical. The State would not entertain them, and the advantage of its doing so to the medical profession or the public is very doubtful. The medical profession should retain its independence, and not become a mere offshoot of the Civil Service or the Poor-law.

M. M.—1. The question is purely a legal one, to be determined by the exact facts. Our correspondent should consult a solicitor.—2. There is no special treatise on the subject.

ERRATUM.—In the annotation last week on the "Prevalence of Venereal Disease in the Army during 1888" (p. 27, first line of first column), the words "more than one-fourth" should have been "*nearly* one-fourth."

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Angel Money, London; Sir Wm. Mac Cormac, London; Dr. Geo. Harley, London; Dr. Geo. H. Savage, London; Dr. Tirard; Dr. Macnaughton Jones, London; Mr. Cavendish Bentinck; Mr. Johnson, Sheffield; Dr. Marsden, London; Mr. Burke, Wolverhampton; Messrs. Bewby and Draper, Dublin; Dr. Mondelet, Brighton; Mr. Wm. Wykeham Myers, Takoro, Formosa, China; Mr. Pratt, Devon; Mr. E. Tenison Collins, Kew; Dr. U. B. Bibile, Kandy, Ceylon; Messrs. Rayner and Cassell, London; Miss Oliver, Bayswater; Messrs. F. C. Calvert and Co., Manchester; Dr. J. A. Lindsay, Belfast; Mr. A. Haviland, Bridge of Allan; Mr. Smith, London; Dr. Brett, Watford; Mr. W. Scott Thompson, London; Dr. Herschell, Finsbury-circus, E.C.; Mr. John Hepburn, Hammersmith; Mr. Wm. Berry, Wigan; Mr. W. Roger Williams, London; Surgeon-Major Laurie, Hyderabad; Mr. Richard Hingston, Liskeard; Mr. T. Laffan, Cashel; Mr. J. Thomas, Cardiff Infirmary; Mr. Page, London; Charlotte Carmichael Stokes, Upper Norwood; Mr. David J. Rice, Kennington-park; Mr. E. Elvis, Perry Barr; Dr. Goodfellow, Dartmouth; Messrs. Burroughs, Wellcome, and Co., London; Mr. E. A. Clarke, Wrexham; Messrs. Woodhouse and Rawson, London; Dr. J. B. Hunter, Paisley; Mr. R. W. Peregrine Birch, London; Mr. W. H. Anderson, Fressingfield; Mr. C. Foucart Scanlan, London; Mr. W. H. Salmon, Nottingham; Messrs. Mertens and Co., London; Mr. G. H. Makins, London; Messrs. Daniell and Co., London; Dr. Benham, London; Mr. Henvey, London; Dr. Tucker Wise, Maloja, Switzerland; Mr. Robt. Walker, London; Mr. George Olliver, Brighton; Mr. W. M. Leng, Dundee; Messrs. Street and Co., London; Mr. Webb, London; Dr. Lyle, Bromsgrove; Mr. Alfred Lingard, London; Mr. F. W. Joshua, Gt. Malvern; Mr. C. E. Browne Séquard, Brighton; Mr. J. Cohen, Rotherham; Mr. E. C. Bousfield, London; Dr. Wallace, Colchester; Mr. S. Osborn, London; Mr. E. Swain, Arlesey; Mr. Kitchin, Whitehaven; Mr. Ford, Devonport; Dr. E. T. Neve, Kashmir; Mr. Arbenz, Birmingham; Mr. Vincent Prendergast, London; Mr. C. F. Newcombe, Victoria, British Columbia; Mr. English, London; Mr. Whittle, Liverpool; Mr. John Clarke, Kirkdale; Mr. Garner, London; Rev. F. Lawrence, Westow, York; Mr. G. P. Field, London; Mr. Squarey, Liverpool; Mr. Edward T. Clifford; Ch. Alexander, Upper Clapton; Grimsby Hospital; X. Y. X., Edinburgh; M.D., London, W.; J. D., Reading; Pro bono Publico, Clapham; General Hospital, Birmingham; Musicus, Stoke Newington; Æsculapius, Carnmoney; F.R.C.S., L.R.C.P., Lond.; Fair Play, Clapham; Exact, Bristol; W. B., Manchester; M. E., Thornton Heath; Omicron, London; Bright, Preston; M., Nottingham; Quid pro quo; Medical Superintendent, Notts; F.R.C.S.E., London; Old Town Councillor, Rochdale; Manager, St. Bede Chemical Co., Newcastle; Norfolk and Norwich Hospital.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Elvis, Birmingham; Mr. Eddowes, Loughboro'; Messrs. Hazell, Watson, and Viney, London; Mr. Mackenzie, Huddersfield; Messrs. Hooper and Co., London; Mr. Freeman, London; Dr. Taylor, Norwich; Mr. Jones, Barmouth; Mr. Williams, Cornwall; Mr. Hewett, London; Mr. Pullin, Sidmouth; Mr. Somerville, Dorset; Mr. Allsop, Saltaire; Mr. Dixon, Manchester; Mr. Hughes, London; Mr. May, Hants; Dr. Wright, Derbyshire; Dr. Squire, London; Mr. Style, Worcester; Mrs. Hitch, St. Leonards; Mr. Hornibrook, London; Mr. Heywood, Manchester; Mr. Sabreton, Manchester; Mr. Jennings, Coleford; Mr. Hemming, Glamorgan; Mr. Mahon, Ireland; Mr. MacEwen, N.B.; Mr. Hopkins, London; Messrs. Fenwick and Chinery, London; Dr. Knapton, Southport; Mr. Symonds, London; Payne, Edinburgh; Bath Royal United Hospital; House Surgeon, London; W. M., London; Galen, London; Hamar, Rochester; K., London; L.S.A., London; North London Institute; Medicus, Leytonstone; Assistant, London; Bridgwater Infirmary; F. E. M., London; Medicus, Birmingham; Matron, Green Lanes; Florence, Yorks; A. B., Liverpool; M.B., Hereford; Clayton Hospital; Omega, Birmingham; Rechabite, London; Yorkshire College; Abstainer, Selby; E. N. R., London; Medicus, Kent; The Hospital, Rotherham; C. S., London; A. B., Reading; L. S., Upper Norwood; Alpha, Leytonstone; Medicus, St. Helens; St. Nicholas Home, Tooting; J. T. O., London; E. C. E., London; Nomen, Liverpool; Pax, London; N. Z., London; Physic, Newcastle; Delta, Lewisham; Pulmo, London; Mater, London; Advertiser, London; Medicus, London.

Liverpool Daily Post, Barnsley Independent, Reading Mercury, Gloucestershire Echo, Lincoln Gazette, Hertfordshire Gazette, Weekly Free Press and Aberdeen Herald, Mining Journal, Surrey Advertiser, Derbyshire Times, Sunderland Herald and Daily Post, &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, July 16.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.

Wednesday, July 17.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.) Surgical visits on Wednesday and Saturday at 9.15 A.M.

Thursday, July 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, July 19.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 20.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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